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TESIS DOCTORAL

TEACHERS' KNOWLEDGE ABOUT LANGUAGE AND CLASSROOM INTERACTION IN CONTENT AND LANGUAGE INTEGRATED LEARNING

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Abstract

This thesis investigates the knowledge about language, or language awareness, deployed by four secondary teachers who teach their subjects through English as an additional language as part of a Bilingual Education Project run jointly by the British Council and the Spanish Ministry of Education. The study contributes to the research effort on Content and Language Integrated Learning (CLIL), where CLIL is defined as any educational initiative in which non-language subject matter is taught through the medium of an additional language. Although CLIL teachers have responsibility for their students' language development, as well as their learning of subject matter, the nature of the language awareness held and deployed by CLIL teachers has not been the focus of much study. This has serious implications, as without such studies, it is very difficult to construct a knowledge base for CLIL teaching and teacher education. This is the gap that this study aims to fill.

Using the framework of teacher cognition research, the study examines the language awareness deployed by the four CLIL teachers, both in their classroom practices and their verbal commentaries (interviews and video-stimulated comments). Three perspectives on language are identified (language as a tool for learning, language as curriculum concern, language as competence) and these are related to three dimensions of teacher language awareness (TLA), and four 'modes of knowing' (public-theoretical; public-practical; personal-practical; personal-theoretical). Methodologically, the study adopts a social practice approach which highlights the action-orientation of the discursive settings in the study by adapting tools from conversation analysis (CA) and discursive psychology. Findings show how the teachers skilfully deployed L2 interactional competence in setting up and maintaining five classroom 'micro-contexts' linked to pedagogic goals, and in carrying out a wide range of 'language-focused practices' (LFPs) in which they proactively and reactively drew learners' attention to aspects of the L2. However, the teachers deployed their TLA mainly in two knowledge modes (personal-practical and personal-theoretical), and did not generally engage with the 'public' knowledge modes (public-theoretical, and public-practical), with the result that much of the L2 focus was incidental. The study has implications for the understanding of CLIL classroom interaction, the study of CLIL teachers' cognitions and practices and for teacher education in CLIL.

Resumen y conclusiones

Esta tesis investiga la cognición y las prácticas en relacion con el uso de una segunda lengua (L2) como medio de instrucción de cuatro profesores de enseñanza secundaria. Los profesores impartían sus asignaturas en inglés dentro de un proyecto de educación bilingüe organizado conjuntamente por el British Council y el Ministerio Español de Educación. El estudio es una aportación al campo de investigación AICLE *(*Aprendizaje Integrado de Contenidos y Lenguas Extranjeras), que se define como cualquier innovación pedagógica que consiste en la enseñanza de contenidos no-lingüisticos a través de una lengua extranjera. La tesis aplica el marco de la investigación sobre la cognición del profesor (teacher cognition) a un campo (AICLE) donde hay una carencia de estudios de esta índole. El motivo último del estudio es contibuir a la construcción de una base de conocimiento de AICLE, sobre todo en lo que se refiere a la formación de profesorado.

La tesis utiliza, adapta y expande el concepto de concienca del lenguaje (language awareness) para examinar como la segunda lengua como medio de instrucción se manifiesta en la cognición y prácticas de los profesores tanto en el aula como en sus comentarios verbales. Los comentarios verbales fueron obtenidos por medio de entrevistas individuales y la técnica de recuerdo estimulado mediante grabaciones de video (video stimulated recall). Una aportación de la tesis es la elaboración de un marco para la investigación del conocimiento o conciencia del lenguaje para profesores de AICLE. El marco consiste en tres perspectivas sobre el lenguaje en AICLE (lenguaje como herramienta de aprendizaje; lenguaje como objetivo curricular; lenguaje como competencia del aprendiz). Estas tres perspectivas se vinculan con tres dimensiones de la conciencia del lenguaje del profesor (el dominio del idioma del propio profesor para la mediación de contenidos; los conocimientos metacognitivas y metalingüisticas que permitan al profesor identificar objetivos curriculares: la habilidiad de conceptualizar el lenguaje desde el punto de vista del alumno para facilitar el acceso a los contenidos). Una segunda aportación de la tesis es la formulación de otro marco que consiste en cuatro ‘modos de saber’ (público-teórico; público-práctico; personal-práctico; personal-teórico) que describe no sólo los contenidos de la conciencia del lenguaje de los profesores, sino las distintas orientaciones hacía los conocimientos y las posibles trayectorias entre estas orientaciones.

Metodológicamente, la tesis utiliza un enfoque que realza el discurso como acción social, en vez de ver el discurso como 'ventana' que revela un mundo interior de creyencias o conocimientos. Este enfoque es innovador ya que es una alternativa al cognitivismo predominante en los estudios sobre profesores. La tesis también responde a las críticas lanzadas recientemente (por ej. Mann 2011) sobre el uso de entrevistas cualitatívas en la lingüistica aplicada. La tesis argumenta que muchos estudios de cognición del profesor utilizan datos discursivos sin tener en cuenta los contextos de interacción social en los cuales los datos fueron recogidos. El estudio combina los recursos metodológicos del análisis de la conversación y psicología discursiva para mostrar como los profesores, en interacción con el investigador, construían versiones de sus prácticas en el aula en relación con el uso del lenguaje utilizando una amplia gama de recursos discursivos.

Los resultados demuestran como los profesores empleaban habilmente su competencia interaccional en la L2 para establecer y mantener cinco 'micro-contextos' en el aula, en los cuales la organización de la interacción estaba en consonancia con sus objetivos pedagógicos. Dentro de los micro-contextos, los profesores realizaban una amplia gama de prácticas enfocadas al lenguaje (Language-focused practices o LFPs) para, de forma proactiva o reactiva, desviar la atención de los alumnos hacía aspectos formales de la L2. Sin embargo, los profesores empleaban su concienca del lenguaje casi exclusivamente en dos de los modos de saber (personal-práctico; personal-teórico), y no incorporaban conocimientos derivados de las dimensiones 'publicos' del saber. La tesis argumenta que esta circumnstancia podría estar en la raíz del carácter incidental y no sistemático de su tratamiento del los aspectos formales de la L2 en el aula. La tesis, por tanto, realza la habilidad que los profesores empleaban en manejar y gestionar la interacción en el aula para desviar la atención de los alumnos hacía contenidos académicos y aspectos de la L2. Sin embargo, argumenta que una más profunda integración en AICLE de lenguaje y contentidos requeriría un modelo de formación de profesorado que fomentara la habilidad del profesor de AICLE de integrar los conocimientos 'publicos' sobre el papel del lenguaje (tanto teóricos cómo prácticas) con los 'personales'.

For Rocío

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Chapter 1. Introduction

1.1 Purpose and scope of the Study

This thesis investigates the knowledge, thinking and teaching practices in relation to language of teachers who teach academic subjects through the medium of a foreign language in a secondary school in Spain. The context of the study is a Bilingual Education Project jointly run by the Spanish Ministry of Education and the British Council (in the rest of the thesis referred to as the BEP), and the study focuses on the practices and cognitions of four teachers in one secondary school which took part in this project. The study is situated within the research programme of investigating the wider phenomenon of CLIL (Content and Language Integrated Learning) in Europe. Briefly, CLIL is a form of bilingual education in which academic subject matter is taught through the medium of a second or foreign language. Over the last decade and a half, this approach has been receiving growing attention in Europe, at policy, practitioner and research levels. In the context of the use of English as a medium of instruction, which is the case in this study, CLIL can be seen as one of the three growing trends in English language education, along with the teaching of young learners and the teaching of English as an international language (Graddol 2006).

In the European context, which is the wider context of this study, CLIL is seen at an EU policy level as a key element in the Union's drive for achieving greater levels of plurilingual competence among its citizens. Thus, the EU's 2004-6 action plan for promoting language learning and language diversity, points out that CLIL

> has a major contribution to make to the Union's language learning goals. It can provide effective opportunities for pupils to use their new language skills now, rather than learn them now for use later. (European Commission 2003:19)

CLIL, then, is seen as a key strategy in achieving a more plurilingual citizenship in the EU, and has been implemented with varying degrees of political and economic support across many member states of the EU (see Ruiz de Zarobe and Jiménez Catalán 2009 for a survey of CLIL initiatives and research across Europe). However, one problem which constantly comes up is that of adequate training and preparation of CLIL

teachers. For, if this approach is to be successfully implemented, it follows that a crucial element is the provision of teaching staff with the appropriate language skills and methodological training. This is a problem at the policy and programme implementation levels, as without sufficient numbers of new teachers or adequate in-service professional development for existing teachers, the ambitious plans for the implementation of CLIL across Europe will not be realisable.

However, the issue of the CLIL teacher is not only a problem at the level of policy. At the research level, there has also been relatively little attention paid to what teachers think, know and do in CLIL and other related approaches such as immersion. This is true even in the most studied bilingual education context, the immersion programmes in Canada. As Fortune, Tedick and Walker point out,

> there is still much to learn about the knowledge, thinking and teaching practices of immersion teachers (and) a review of the literature exposes a lack of attention paid to immersion pedagogy as a topic of inquiry, in particular inquiry from a classroom-based, teacher informed perspective (2008: 72).

This is a serious gap, especially bearing in mind the shortage of adequately trained teachers highlighted above. It has profound implications for the future development of CLIL as a practice, for, without greater knowledge of what experienced CLIL teachers think and do, it will be difficult to start to build a knowledge base for a principled approach to CLIL teacher education. Without the establishment of such a knowledge base, and the implementation of CLIL teacher education programmes based on sound principles, the EU's (and other global actors') ambitious plans for the expansion of CLIL as a solution to the needs for greater plurilingual competence among their citizens, are likely to be frustrated.

In addressing this serious gap in the CLIL research effort, the study draws on the theoretical and methodological framework of teacher cognition research. Teacher cognition is the study of what teachers think, believe and know and how this relates to what they do (Borg 2006). Research on teacher cognition has a long tradition in general education research going back to the late 1970s, and has been a growing research area

within language teaching since at least the mid 90s (Borg 2006; Woods 1996). However, this framework has not been used significantly in research on teachers in CLIL and other related approaches such as immersion. Given that CLIL can be seen as a complex hybrid of practices drawing on the pedagogies of different academic subjects and those of language education, it is somewhat surprising that it has not attracted more attention from the field of teacher cognition research.

Within the framework of teacher cognition research, the study focuses on the knowledge, thinking and teaching practices of the teachers in relation to the roles of the language which is the medium of instruction, in this case English. It is thus positioned within a sub-field of teacher cognition research, that of teacher language awareness, or knowledge about language (Andrews 2007; Bartels 2005; Cenoz and Hornberger 2008). This is justified because CLIL is essentially a language education initiative, driven by the needs for citizens' plurilingual competences and not by any claims that CLIL is necessary to raise students' achievements in mathematics, science, or history. CLIL teachers, in the type of bilingual programme which is the context for this study, are of course responsible for their students' subject learning, but they are teaching their subjects in a foreign/international language because it is believed that this will lead to greater plurilingual competence in their learners as well. However, because language is the main tool used for communicating about content knowledge, it will not be possible to separate language from issues relating to the representation of content. Thus, while the study does not have as its main focus the teachers' practical knowledge of subject matter, it does have as a central concern the ways in which teachers use the L2 as a tool for representing content knowledge in classroom talk. Thus, language in CLIL can be seen not only as an intended outcome in terms of plurilingual competence, but as an essential prerequisite for content learning to be possible at all. It is for these reasons that CLIL teachers' knowledge, thinking and teaching practices in relation to language need to be an essential component in the wider project of the construction of a knowledge base for CLIL. That is the contribution that this thesis sets out to make.

1.2 Theoretical perspectives used in the study

All social research is a representation of social life consisting of a dialogue between 'ideas', which correspond to the theory as found in the relevant literatures and 'evidence', which is produced in a study's empirical findings (Ragin and Amoroso 2011: xviii). The ideas which form the conceptual and theoretical underpinning of this study are drawn from two main areas of educational and applied linguistics research: teacher cognition and educational linguistics. The study draws on broad conceptualizations of teachers' knowledge, and within this, a specific sub-field of teacher cognition research, that of teacher language awareness/knowledge about language to frame the research questions and findings relating to the roles of language in CLIL teachers' practices and representations of practice. It draws on research on the roles of language in CLIL and other related approaches such as immersion to build a triperspectival conceptualization of language, with language seen as a tool for learning, as a curriculum concern, and as a matter of competence.

Each of these three perspectives on language is linked to one of the three dimensions of Andrews' (2007) model of teacher language awareness. Andrews (2007: 28-29) describes teacher language awareness (TLA) as comprising three major components:

- knowledge of (language as) subject matter and language proficiency, and mediation of former through latter;
- metacognitive/metalinguistic awareness of subject knowledge and proficiency as basis for tasks of planning and teaching;
- knowledge of language from the learners' perspective (their interlanguage development and the extent to which language content in materials/lessons may pose difficulties for them).

Andrews developed this conceptualization of TLA in the context of foreign language teaching. Thus, in his framework, 'subject knowledge' refers to explicit knowledge about language, particularly pedagogical grammar. (e.g. for grammar explanations). However, if we see 'subject knowledge' as referring to any of the subjects taught in CLIL, we can see that the three dimensions of TLA are also a useful heuristic for conceptualizing the types of language awareness needed by CLIL teachers. CLIL

teachers most definitely use their L2 proficiency (and, as will be argued in this thesis, their L2 interactional competence) to mediate subject matter learning. They need not only metacognitive awareness of the relevant content knowledge and skills, but also metalinguistic awareness of how language is implicated in representing content knowledge and in accomplishing learning tasks. And, crucially, they need to be aware of the levels of linguistic competence of their learners in relation to content learning objectives and tasks, and to be able to adapt their pedagogic strategies accordingly.

These three dimensions of teacher language awareness map quite readily onto three main dimensions, or perspectives, on language in the literature relevant to CLIL and other related approaches. These three perspectives are: language as a tool for content teaching and learning; language as a curricular concern; language as a matter of learners' competence. These three perspectives are not seen in the study as mutually exclusive, or as reflecting how teachers themselves represent their practices. The triperspectival conceptualization is proposed as a heuristic device, or tool for analysis, which allows for a dialogue between the ideas as found in the literature and the evidence as represented in the study's data. Each perspective is briefly outlined below, as a preview to the full account which is presented in chapter three of the thesis.

The first perspective on language which organizes the study is that of language as a tool for teaching and learning. This is the most difficult to investigate, as it is, in many ways, an invisible component of language use for many teachers, whether CLIL or L1 subject teachers. Mortimer and Scott (2003) describe a 'paradox' in science teaching which is of direct relvance to the teaching of any subject, and is particularly relevant to CLIL because of its linguistic justification:

> It is an interesting paradox that, while few would disagree (...) that teacher and student talk is of central importance in any science lesson, relatively little attention is paid to it, either in science teaching circles or in science education research. In relation to science teaching practices, it seems that teacher talk is just something that the teacher gets on with. (Mortimer and Scott, 2003: 2)

It is this paradox that makes it difficult to elicit this aspect of teachers' knowledge. Precisely because little attention is paid to it, there is a lack of a metalanguage with

which to talk about it, in spite of some important recent efforts within applied linguistics to remedy this (Seedhouse 2004; Walsh 2011). In fact, within CLIL, this lack of attention to the communicative properties of CLIL lessons has been documented by Dalton-Puffer in her important study of CLIL classroom discourse:

> The event in which teachers and learners are participating (the CLIL lesson) is never brought into focus as an important ingredient and condition for the learning process (...) the internal structures, functions and goals of talk in lessons remain unspecified so there is a dearth of language to talk about communicative achievements (…) (Dalton-Puffer 2007: 276).

In this thesis, the teachers' knowledge of the use of language as a tool for learning is precisely their representations of the 'internal structures, functions and goals of talk in lessons'. This is approached in the study in two main ways. First, the framework of conversation analytic work on classroom talk (e.g. Seedhouse 2004) is used to provide a description of the 'micro-contexts' which emerge in the classrooms in the study. This allows for a description of the interrelationships between pedagogic goals and interactional organization as seen in the recorded data. To further explore these relationships from the teachers' perspectives, a videoclip-based stimulated comment procedure is used. Thus, it is possible to capture how this dimension of language emerges both in the teachers' actual classroom practices and in their representations of practice.

The second perspective on language, that of language as a curriculum concern, borrows and adapts the term from Leung's (2001) work on English as an additional language (EAL) in the United Kingdom. He pointed out that EAL was not recognised as a distinct subject area, and that no specific language learning objectives were identified in the curriculum. In this context, L2 learning was a 'diffused curriculum concern' and learners, in this case L2 learners in mainstream classrooms, were simply expected to pick up English through participating in enquiry-based activities and having opportunities for meaningful language use. There was no specification of precisely what the language learning goals were. As Leung puts it, 'There is relatively little discussion on what language should be learned – a detailed EAL curriculum specification of grammatical and discursive features is virtually unheard of' (2001: 35).

In this thesis, I borrow the term 'curriculum concern' to bring together ways in which the teachers in the study represent subject-related language issues in relation to their place in the curriculum. It does not refer to the curriculum of language as a subject, which does of course identify specific language learning objectives. In the thesis, language as a curriculum concern covers, for each non-language subject taught, issues such as the overall balance between language and content, whether there is a distinct focus on language in planning for teaching and assessment, which aspects of language are focused on, whether any language focus is more general or content-specific, and which instructional and assessment strategies are identified for any focus on language. Using Lyster's (2007) terms, it covers teachers' proactive approaches to language, in which aspects of L2 English are singled out for attention, whether in the preactive stage as planning decisions, or in more spontaneous ways during classroom interaction. Language focus in the classroom is proactive if it is introduced by the teacher not as an orientation to some aspects of the learners' competence as evinced in an evaluation of the linguistic aspects of performance of any classroom or homework task. Rather, it is a focus on some aspect of language deemed to be important for a variety of reasons: it can be key concept-specific terminology, it can be the names of tools and equipment used to carry out a task, or it may involve highlighting a certain grammatical structure considered to be important for the topic being studied, or for the learners' L2 development more generally. These are all empirical matters, and the study seeks to throw light on how teachers do focus on language as a curriculum concern in actual practice.

The third perspective on language is that of language as a matter of learners' competence. By this is meant mainly the teachers' representations of the learners' linguistic competence, but the study also focuses, where it emerges, on the teachers' representations of their own competences in using English as a medium of instruction. Focusing on language as a matter of competence allows the study to examine the teachers' evaluative practices. In representing practice in interviews, the teachers will produce assessments of the learners' (and sometimes their own) states of competence in using English. And, of course, in classroom interaction, teachers may evaluate aspects of learners' L2 performance by providing some kind of corrective feedback. This relates to Lyster's (2007) concept of reactive focus on language, and, more generally, to a 'focus on form' approach in L2 instruction (Doughty and Wiliams 1998). Again, this is

a crucial aspect of teachers' practical knowledge for teaching in CLIL, as they will not only have to adjust their instruction to the perceived levels of L2 competence of their learners, but to respond in appropriate ways to learners' attempts to communicate, hopefully in ways that will help to push forward their L2 development. In this sense, the focus on language as competence is also very relevant to the concept of formative assessment, as feedback or mediation spontaneously provided during classroom interaction. It is clear, then, that a very important component of the practical knowledge of language for CLIL teachers is their orientation to language as competence, in that they will need to develop sensitivity to learners' states of L2 knowledge and acquire a high degree of interactional competence in the classroom.

By bringing together perspectives from two areas of research (teacher cognition and language and pedagogy both in general education and L2 learning) it is possible to construct a conceptual framework for the description of CLIL teachers' knowledge, thinking and teaching practices in relation to the role(s) of language in teaching their subjects. The evidence of the teachers' practices and understandings is the 'data' which enters into dialogue with the 'ideas' in the theoretical framework. Table 1.1 shows how the two conceptual frameworks (the three perspectives on language and the three dimensions of teacher language awareness) map onto each other.

Perspectives on language	**Dimensions of teacher language awareness (TLA)**
Language as a tool for learning	Mediation of content knowledge through L2 proficiency and interactional competence;
Language as curriculum concern	Metacognitive/metalinguistic awareness of linguistic aspects of content knowledge as a basis for tasks of planning and teaching;
Language as a matter of learner competence	Knowledge of language from the learners' perspective and the extent to which they will be able to cope with language content in materials and activities.

Table 1.1 Perspectives on language and teacher language awareness (TLA)

Beyond describing the theoretical framework that underpins the study, it is also necessary to make clear the key metatheoretical assumptions which inform its overall orientation towards the phenomena under investigation. The study has an overall social practices orientation, in that its main unit of analysis is human social practice, and not other possible analytic units such as individual traits, or mental processes. A social practice perspective draws on such theorists as Wittgenstein (1953), Bourdieu (1977) and Garfinkel (1967), in proposing that social life and social action can best be understood as sets of ordered practices, embodied in human activity, and not as the result of pre-existing mental representations such as beliefs or attitudes. In this view, practices are seen as 'the central social phenomenon by reference to which other social entities such as actions, institutions, and structures are to be understood' (Schatzki 1996: 11). To this can be added other 'social' phenomena such as knowledge and belief, for as Schatzki puts it, 'practices are the site where understanding is structured and intelligibility articulated' (1996: 12). Taking practices as the central social phenomenon has consequences for the conception of discourse, which is seen not as a window onto pre-existing mental phenomena, but as social action in itself, part of the very practices in which it is produced. This theoretical orientation raises important issues about the ontological and epistemological statuses of the phenomena under study in the thesis, particularly, but not exclusively, in the area of teacher cognition. Thus, language awareness is not seen as some kind of mental representation of knowledge about language that is inert until it is put into practice in classroom interaction, but rather is seen as part of a set of embodied practices and shared practical understanding.

1.3 Participants and research context

The participants in the study were four teachers in a secondary school in a small town north of Madrid and one each of their classes. This school joined the British Council/Ministry Bilingual Education Project in 2004-5, taking in pupils from a nearby primary school which had participated in the Project. In the secondary phase of the BEP, the schools' bilingual sections follow an integrated curriculum which combines aspects of the Spanish curriculum and that of England and Wales. English as a subject lessons are increased from three to five hours per week, and students study two whole subjects in English. These subjects can vary throughout the four years of compulsory secondary education, but include science (chemistry, biology and geology), social

science (history and geography) and technology. As mentioned above, the students had generally attended a local primary school which participated in the BEP, and thus they had been exposed to bilingual education for upwards of six years. The subjects taught by the four teachers were science (biology), social science (history and geography) and technology. All the teachers were subject specialists, but the two social science teachers were also qualified as language teachers, and had previously taught English before teaching social science in English. The teachers, at the time of the study, had 2-4 years' experience teaching their subjects in English. The town itself is a middle and upper-working class area, with a relatively homogenous population, although there is a small immigrant population, mainly from Latin American countries. In the classes which participated in the study, the vast majority of the pupils were Spanish, with no signficant immigrant presence.

1.4 Research questions and methodology

Having previewed the key ideas from the two areas of literature which form the theoretical framework for the study, I can now set out the research questions which drove forward the collection of evidence to enter into dialogue with these ideas:

1. What are the relationships between the teachers' pedagogical goals and the organization of interaction in their classrooms?
2. How do the teachers construct the relationships between interactional organization and their pedagogic purposes in postactive reflective comments?
3. How do the teachers describe the roles of language in their practices in pre-teaching interviews?
4. What aspects of language do the teachers focus on proactively in classroom interaction and how do they deal with them?
5. How do the teachers 'construct' the learners in terms of their linguistic competences?
6. How do the teachers respond reactively to learners' displays of linguistic (in)competence in classroom interaction?

The six research questions are organized in pairs, each pair corresponding to one of the perspectives on language and to one of the dimensions of language awareness outlined in section 1.2 and shown in table 1.1.

As described in section 1.2, the study adopts an overall social practices perspective on the phenomena which it investigates, and this has important implications for its methodological approach. The main implication concerns the role of discourse in the study. Other studies on teacher cognition and practice use discourse as a 'resource' by which to gain access to other phenomena of interest, such as knowledge and beliefs. These phenomena are seen as inner, mental representations which can have various functions, such as acting as a filter of incoming information, or as a guide for practice. Access to such cognitions is gained through recourse to various types of verbal reports and commentaries such as semi-structured interviews, repertory grids, written reflection and think-aloud protocols and stimulated recall interviews (Borg 2006). Such studies generally ignore the specific characteristics of the interactional settings in which these data were produced and the ways in which 'cognitive' matters and accounts of practice are co-constructed as interaction between researchers and teachers as the interaction unfolds (Mann 2011). An alternative approach is to see the discourse data as a 'topic' of study in its own right (Silverman 2010: 90), with an analytic focus on how the teachers' language-related knowledge, thinking and teaching practices are represented and co-constructed in a range of interactional settings (semi-structured interviews, classroom interactions, and videoclip-stimulated comments).

Taking this approach makes it possible to circumvent some serious methodological problems which have affected research on teachers' knowledge, beliefs and teaching practices. These problems include the supposed distinction between teachers' 'professed' and 'attributed' beliefs (Speer 2005) - the idea that we can easily distinguish between beliefs and knowledge teachers themselves claim to have, and those which we attribute to them through our descriptions of their practices. A social practices approach which is much more reflexive about the co-constructed nature of discourse can avoid falling into this trap, as it is able to show that no beliefs are ever simply 'professed' but filtered through the conceptual frameworks and data elicitation methods used by researchers. Another related problematic issue in teacher cognition research is the lack of shared understanding of key terms and concepts between researchers and teachers

(Speer 2005). Often, researchers and teachers use the same concept ('group work' is a good example) but mean very different things by it. Speer (2005) recommends the use of videoclips to allow teachers and researchers to focus on specific instances of practice rather than abstract descriptions, and this is the approach taken in this study, albeit with modifications to take into account the study's recognition of the co-constructed nature of the resulting discourse data.

The main methodological tools used for the analyses of the data in the study are drawn form two contiguous research fields: conversation analysis and discursive psychology. Sidnell (2010: 1) defines conversation analysis (CA) as 'an approach within the social sciences that aims to describe, analyse and understand talk as a basic and constitutive feature of human social life'. CA uses close transcriptions to examine the moment-by-moment unfolding of interaction, and all aspects of the interaction, however small, are considered potentially relevant from the participants' point of view. While CA's overall research programme is to further understand interaction as part of human sociality (Enfield and Levinson 2006), it can also be used in more 'applied' studies to focus on specific phenomena of interest in fields such as education and applied linguistics, in which analyses of talk can contribute to better understandings of professional practice (Richards and Seedhouse 2005).

Discursive psychology is an approach to discourse analysis which emerged in the 1990s out of earlier studies on the sociology of scientific knowledge and critiques of cognitively-oriented social psychology (Edwards 1997; Edwards and Potter 1992). In discursive psychology, 'psychological' matters, rather than being seen as behind the scenes mental phenomena, are seen as discursive actions (Hepburn and Wiggins 2007). People may refer explicitly to psychological matters in their talk, such as when they mention their own or others' states of knowledge or beliefs or their intentions, or these states can be 'built in' implicitly in the ways people construct accounts, or descriptions, of events or actions. In line with the social practices approach taken in this study, and teacher cognition research's concern with matters of knowledge and belief and their relation to practice, it is an extremely promising approach which has the possibility of opening up new avenues of research. Discursive psychology draws heavily on the analytic frameworks and findings of conversation analysis, though it differs from CA in

that it has a more social constructionist and relativist orientation (Potter 1996; Potter and Hepburn 2008).

In the study, then, the tools of CA and discursive psychology are used as they are the methods most compatible with the social practices orientation of the study, and which are best able to handle the study's focus on the ways in which the teachers' language-related knowledge, thinking and practices are represented and co-constructed in discourse. However, the study remains a study of teacher cognition and practice. That is, it does not set out to be a 'pure' CA study which aims to explore social interaction in and of itself, nor does it have as its main objective a close examination of the ways in which 'psychological' matters are constructed in discourse. It responds to critiques of the somewhat naïve and unreflexive ways in which teacher cognition and applied linguistics qualitative research have ignored the co-constructed nature of discourse, but it keeps its eyes firmly fixed on the phenomenon of interest in the study, CLIL teachers' language-related knowledge, thinking and practices.

In order to build a detailed description of the phenomemon under investigation, a multicase research strategy is used. According to Stake (2005), multicase studies are a research design which seeks to build greater understanding of a specific phenomenon, or 'quintain'. It is this phenomenon which is the true objective of the study, not the individual characteristics or traits of the individual cases. They are only of interest insofar as they contribute to a better understanding of the quintain. This is the case in this study. The central phenomenon under investigation, the quintain, is CLIL teachers' language awareness (TLA-CLIL) and the individual cases in the study, the four teachers, are of interest in that their practices and representations of practice contribute to a greater understanding of this phenomenon.

In terms of the research design and procedures, data are gathered at the three stages of teaching normally identified in teacher cognition research: the preactive stage where planning decisions are made, interactive classroom teaching, and postactive reflection on practice. At the preactive stage the teachers complete an instrument called a CoRe (Loughran, Mulhall and Berry 2004) in which they are asked to reflect on the language dimensions of a topic they are going to teach. This instrument is used as the basis of a semi-structured interview, which seeks to examine how language emerges as a

curriculum concern for the teachers. For each teacher, three lessons are video-recorded, and these recordings are transcribed and analysed in order to produce an overall description of the different 'micro-contexts' in the classrooms. Videoclips which represent aspects of the teachers' practices which have emerged in the CoRe interviews and the analyses of the interaction are presented to the teachers for comment. These video-stimulated comments are then analysed for the ways in which the teachers construct their language-related practices. The aim is to achieve a description of the quintain, the CLIL teachers' language awareness, which addresses the theoretical 'ideas' relating to the roles of language in CLIL teaching and teacher cognition, while at the same time taking a strongly reflexive approach to the co-constructed nature of the interaction through which these phenomena emerge.

1.5 Overview of the Thesis

The thesis is divided into three main parts. The first part (chapters one to four) provides an overview of the thesis (this chapter) and presents the main theoretical underpinnings of the study (chapters two to four). Chapter two frames the thesis by setting out the wider context of CLIL as a sociolinguistic and educational phenomenon. Chapter three introduces the triperspectival conceptualization of language used in the study, reviewing a range of literature in CLIL and other related approaches which theorizes the roles of language in content and language integrated instruction. Chapter four reviews the relevant literature on teacher cognition and language awareness, putting in place the theoretical foundations for the study's focus on CLIL teachers' language-related knowledge, thinking and practices. A framework for the analysis of different 'modes of knowing' is introduced.

The second part (chapter five) describes the methodological approach and research design and procedures. Section three consists of the three findings chapters (six, seven and eight). Each chapter focuses on one of the perspectives on language and its related dimension of language awareness, and addresses the corresponding research questions. Chapter six describes five 'micro-contexts' which emerged in the four classrooms, each one corresponding to a different reflexive relationship between the teachers' pedagogic agendas and the interactional organization. Data from the videoclip-based comments are used to show how the teachers represented and constructed their own and their students'

discursive actions in the classroom. Chapter seven presents the findings on how language emerged as a curriculum concern in the teachers' practices and representations of practice. Data from the CoRe interviews are used to show how the teachers described the roles of English as a curriculum concern in their practices, and extracts from classroom interaction show how the teachers proactively focused on different aspects of language. In chapter eight, interview data are used to show the ways in which the teachers 'constructed' the learners as being more or less competent in using the L2, and classroom interaction extracts are used to show the different ways in which teachers focused reactively on learners' displays of (in)competence relating to uses of the L2.

Part three contains the discussions and conclusions chapters (nine and ten). Chapter nine draws together the main findings, taking up again the main themes introduced in part one, to provide an overall characterisation of the 'quintain', the CLIL teachers' language awareness (TLA-CLIL). The framework for describing different modes of knowing introduced in chapter four is used to produce an overall description of how language awareness in the CLIL teachers' practices and representations of practice is oriented to. Implications for CLIL teaching practices and teacher education are discussed. Chapter ten identifies some limitations of the study, provides some suggestions for further research, and ends with some concluding remarks on the study as a whole.

1.6 Chapter summary

The aim of this introductory chapter was to provide a 'snapshot' of the thesis and to orient the reader in navigating the rest of the text. It began by setting out the scope and purpose of the study, and then went on to preview its main theoretical underpinnings, consisting of a triperspectival conceptualization of language linked to three dimensions of teacher language awareness (TLA), within an overall social practices orientation. The context of the study and its participants were then described. This was followed by a preview of the study's methodological approach, in which the analytic tools of conversation analysis and discursive psychology were used as part of a multicase study strategy in addressing the six research questions. The chapter ended with a brief overview of the thesis. In the next chapter, I turn to the broader context of the study,

examining Content and Language Integrated Learning as a sociolinguistic and educational phenomenon, using a framework for multilingual education to describe the Bilingual Education Project which forms the setting for the study, and reviewing relevant research on CLIL as a European educational initiative.

Chapter 2. Situating CLIL as a multilingual educational practice and as a research effort

2.1 Introduction

This chapter has the overall purpose of situating the study, both in terms of CLIL as a multilingual educational practice, and as a research effort. The first part of the chapter focuses on CLIL as a multilingual educational practice, using the sociolinguistic and educational matrices of Cenoz's (2009) continua of multilingual education to set it among other approaches to the teaching and learning of other subject matter in/through a foreign or second language. This framework is then used to provide an overall description of the setting for the study, the Spanish Ministry of Education/British Council Bilingual Education Project (BEP). The second part of the chapter shifts the focus to CLIL as a research effort, using Dalton-Puffer and Smit's (2007) framework to outline the main approaches to researching CLIL. This is followed by a general review of the research on European CLIL carried out so far, with an emphasis on the national context of this study, Spain. The present study is then situated in terms of Dalton-Puffer and Smit's framework and the current research effort in European CLIL.

2.2 Situating CLIL as a multilingual educational practice: the wider contexts and the study's setting

This section begins by exploring the 'family resemblances' between CLIL and other types of bi- and multilingual education, using Cenoz's (2009) continua of multilingual education. It then uses this instrument to provide a description of the setting for the study: the Spanish Ministry of Education/British Council Bilingual Education Project (BEP).

2.2.1 Situating CLIL: family resemblances among different types of bilingual education

When Content and Language Integrated Learning as it has been developed in Europe is considered in terms of the language learning outcomes expected for students, it clearly meets the criteria for definition as a type of bilingual education. For example, García (2009) distinguishes traditional second or foreign-language programmes which teach language as a subject from bilingual education programmes in which the language is used as a medium of instruction. As she puts it, 'bilingual education programmes teach content through an additional language other than the children's home language' (p. 6). Baker (2006) makes a distinction between 'weak' and 'strong' forms of bilingual education. Perhaps the most common 'weak' form is 'mainstream education with foreign language teaching' which 'drip-feeds' the foreign language as a curriculum subject. The aim in terms of language outcome of this type of education is a very limited bilingualism. He contrasts this with 'strong' forms of bilingualism such as immersion and bilingual education in majority languages, in which category he includes CLIL (2006: 251). In these programmes, the desired outcomes are higher levels of bilingualism and/or biliteracy, and, in some cases, intercultural competence.

Although Baker includes immersion and CLIL (as a type of bilingual education in majority languages) in the same category of 'strong' forms of bilingual education, it is useful to be aware of not just the similarities, but also the differences, between them. Swain and Johnson (1997) identified eight core and ten variable features of immersion programmes. The core features are listed below:

1. The L2 is a medium of instruction;
2. The immersion curriculum parallels the local L1 curriculum;
3. Overt support exists for the L1;
4. The programme aims for additive bilingualism;
5. Exposure to the L2 is largely confined to the classroom;
6. Students enter with similar (and limited) levels of L2 proficiency;
7. The teachers are bilingual;
8. The classroom culture is that of the local L1 community.

(Swain and Johnson 1997: 6-8)

CLIL, as a kind of majority language bilingual education, shares some of these core features, particularly features one, four, five, six and eight. Feature two can be quite variable in these programmes. For example, some programmes may use an 'integrated curriculum' which includes a mixture of content from the local and overseas (British) curricula. Feature seven may also be a significant difference, as in majority bilingual CLIL programmes in Europe, the teachers are unlikely to be native speakers, and there are wide differences in the linguistic competences of teachers.

More recently, Lasagabaster and Sierra (2010) have been concerned to distinguish these majority language CLIL programmes from the Canadian immersion programmes or heritage language bilingual programmes in Europe, such as those where, for example, Basque or Welsh are used as mediums of instruction. As Lasagabaster and Sierra point out, the terms 'CLIL' and 'immersion' tend to be used interchangeably, with the result that there may be confusion about what they claim to be important differences between them. Some differences which Lasagabaster and Sierra point out are:

- Language of instruction. In CLIL programmes, the language of instruction is a foreign language, whereas in immersion contexts the L2 is present in the students' local communities.
- Teachers. CLIL teachers, unlike most immersion teachers, are non-native speakers of the L2 used as a medium of instruction.
- Learners. CLIL learners often start studying content in the L2 later than their immersion counterparts, with resulting differences in amounts of exposure.
- Materials. In immersion programmes, teaching materials are normally the same as those used by native speakers, while in CLIL, materials may need adapting.
- Language outcomes. In immersion programmes the learners are expected to approach native speaker competence, while in CLIL, the expectations are significantly lower.
- Immigrant students. There may be elitism where immigrant students are included in immersion programmes, but excluded from CLIL programmes.
- Research. There has been a longstanding research effort in immersion programmes, whereas CLIL is still relatively under-researched.

(Lasagabaster and Sierra 2010: 4-7)

Lasagabaster and Sierra's work is useful in defining and limiting the scope of CLIL for the purposes of this study. However, not all CLIL researchers would restrict the use of acronym 'CLIL' to contexts in which a foreign language is used as medium of instruction. For example, Baetens-Beardsmore (2009) sees CLIL as 'an umbrella term that embraces *any type* of programme where a second language is used to teach non-linguistic content-matter' (p. 209 italics added). Ruiz de Zarobe and Jiménez Catalán (2009) observe that the CLIL language 'may be a foreign language, a regional or minority language or even a second state language' (p. xvi). Coyle, Hood and Marsh (2010) are also very categorical about this wider definition of what 'language' can mean in CLIL. They point out that, in their definition of CLIL, an 'additional language' may be 'a second language or some form of heritage or community language' (p. 1).

From the outset, then, it seems that within the CLIL research community there is a lack of agreement as to what the sociolinguistic status of the L2 can be taken to be. In many ways, this can be seen as typical of the struggles for ownership that take place in fledgling research fields. However, as Lasagabaster and Sierra (2010) point out, it is important to be clear what these terms mean, as they can create confusion, especially for the practitioner who would like to find out more about the different approaches. In this study, the approach I take is not to apply the label 'CLIL' in a pre-determined way (this is especially important, as the Project in which the study takes place distinguishes itself from 'CLIL' – see below). In this thesis, the term 'CLIL' is used to position the study within the emerging field of research in this type of majority language bilingual education. The aim is not to get involved in territorial disputes about what CLIL is or is not, but to see the practices described in the study as belonging to a growing body of practice and research which has usefully been labelled as 'CLIL' to distinguish an approach which has much in common with other types of 'strong' bilingual education. Rather than adopting an essentialised definition of 'CLIL' and drawing tight boundaries around it, it is preferable to see the different types of bilingual education as displaying what Wittgenstein called 'family resemblances'. As he put it in his analogy of games, there is 'a complicated network of similarities overlapping and criss-crossing: sometimes overall similarities, sometimes similarities of detail' (Wittgenstein 1953: 32).

So, rather than coming up with a once-and-for-all precise definition of CLIL, we can do as Wittgenstein suggests and 'look and see' in order to provide an accurate description of any bilingual education initiative on its own terms by taking into account a range of sociolinguistic and educational factors. A very useful tool for carrying out such a task is Cenoz's 'continua of multilingual education' (Cenoz 2009). The continua of multilingual education can be used to show how linguistic, sociolinguistic and school factors combine in different ways in different bi- and multilingual education contexts. It thus provides a means of comparing different situations by seeing them as lying at different points on a range of continua (see figure 2.1). Cenoz uses the term 'multilingual', but points out that 'bilingual schools can also be considered a type of multilingual school because the term 'multilingual' refers to multiple languages and this can be understood as two or more languages' (2009: 33).

Starting with school-based factors, schools can be more or less bi- or multilingual depending on how many languages are taught as subjects, how well they are integrated in the curriculum, the age at which they are introduced and the time devoted to them. In most European CLIL contexts, at least two languages (the majority language and one or more regional or foreign languages) will be taught as subjects. There will be differences in the extent to which these languages are integrated into the curriculum, for example, in some primary schools foreign languages can be used in theme-based teaching across different subject areas. In other schools, the second or foreign languages will not be integrated with the rest of the curriculum.

Schools are more multilingual the more languages are used as medium of instruction. However, this also depends on the extent of content instruction in the medium of the foreign language. In some contexts, there is a 'sampling' approach to CLIL, in which a relatively small part of a subject is taught in the FL, often in collaboration with a language teacher. This 'weak' version can be seen as closer to the version of CLIL that is most discussed in the field of English language teaching. A 'strong' version of CLIL, then, would be more in line with Baker's concept of strong bilingualism, and would refer to contexts in which a whole subject from the curriculum is taught and assessed in the L2.

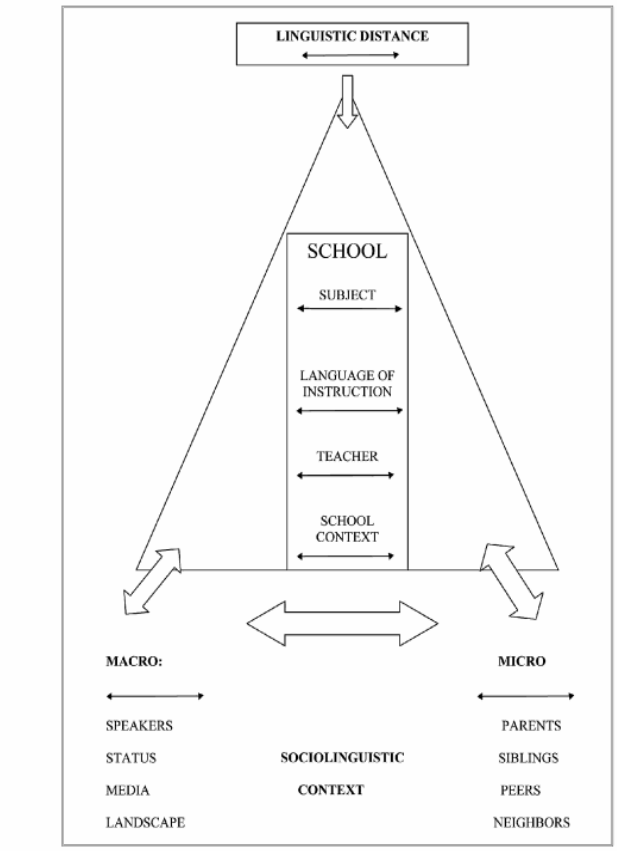

Figure 2.1 The continua of multilingual education (Cenoz 2009)

The 'Teacher' continuum refers to the teachers' own multilingual competences and the extent to which they have received training in this educational approach. As discussed above, one of the distinguishing features of CLIL outlined by Lasagabaser and Sierra is that the teachers are mostly non-native. They may also have had little training in multilingual teaching approaches. Some teachers may have a background in language teaching, while others may be subject specialists with no training in language education. In some contexts, such as the one in this study, teachers may have the benefit of curricular guidelines which specify content and language objectives.

School context refers to the use of different languages inside the school for formal and informal communication apart from classroom lessons. Extending L2 use outside the classroom is, both in terms of oral communication and the 'linguistic landscape' (posters, examples of students' work etc.), often considered to be an extremely useful dimension of CLIL, in that it increases the 'naturalness' of language use.

In terms of linguistic distance, the languages involved in multilingual or CLIL programmes may be closer or more distanced from each other, both in terms of the language typology and the amount of contact there has been between the languages in any setting. Two languages may not be related to each other in terms of typology, but may have been in close contact with the result that one has an impact on the other, for example with the use of 'loan words'' (Baker 2006: 51-52). In European CLIL contexts in which English is the language of instruction, there is the complicating factor of English's role as an international language or Lingua Franca (Graddol 2006). There may be, to a greater or lesser extent, an impact of English in these settings, with English loan words coming into the local languages, and with English being more or less a 'local practice' (Pennycook 2010).

There are two levels at which sociolinguistic variables can be described: the macro and the micro. At the macro level, it is important to consider the numbers of speakers of the target languages, the status of the languages in society, their use in the media and their general presence in the local linguistic ecologies (Cenoz 2009: 37). The more use there is of different languages, the more 'multilingual' the environment will be. In the case of European CLIL, where English is used as the medium of instruction, there will be less variation in status but more in the presence of English in each society. In most contexts, English will have a high status in that it has been chosen as a medium of instruction in the CLIL programmes. However, there are differences in the presence of English in everyday life in different European countries. Northern European countries such as Finland or Holland will be at the high presence end of the continuum, while southern European countries such as Spain may be at the low presence end. In 'low presence' contexts, the only real contact with English for most learners is the classroom. Technology may provide opportunities to overcome this lack of presence of English in these contexts, but, as Lasagabaster and Sierra (2010) point out, this does not mean that learners in all countries are interested in using these opportunities.

The micro sociolinguistic level refers to the students and their local communities of families, friends and neighbours. The context will be more multilingual if more languages are used for everyday communication. In many European countries, there are significant numbers of speakers of co-official regional languages. Also, in most

European countries, there have been significant increases in immigration, with the result that there is much more linguistic diversity in many local communities, particularly in urban areas. However, Cenoz points out that, even when a context is multilingual because of a wide range of languages used in the local community, it will not be so in educational terms if the school does not aim to promote multilingualism. Majority language bilingual educational initiatives like CLIL aim to promote multilingualism in both types of contexts: i.e. in those where a number of languages are already used in the local community, and in those where one language dominates. Where the immigrant population is significantly high, it is important to avoid the danger of elitism mentioned by Lasagabaster and Sierra, by ensuring that immigrant children have equal opportunities to participate in CLIL programmes, and that changing the language of instruction does not do unnecessary harm to their educational opportunities.

In sum, then, Cenoz's continua of multilingual education offers the most principled way of finding one's way around the minefield of terminology that is used to describe the family resemblances among different types of bi- and multilingual educational initiatives. The continua allow researchers and practitioners to share a metalanguage when discussing their programmes, and to be more realistic in sociolinguistic and educational terms about the constraints and opportunities inherent in them. In the next section of this chapter, I use the continua in situating the Bilingual Programme which is the setting for this study.

2.2.2 Situating the study: The British Council/Spanish Ministry of Education Bilingual Project

The classrooms in which data were collected for this study are in a school which participated in the Spanish Ministry of Education/British Council Bilingual Project. This project began in 1996 at primary level, with secondary schools being incorporated in 2004. By 2009, 74 primary schools and 40 secondary schools were participating in the project (Dobson *et al*. 2010), which has the following aims:

- To promote the acquisition and learning of both languages (Spanish and English) through an integrated content-based curriculum;

- To encourage awareness of the diversity of both cultures;
- To facilitate the exchange of teachers and children;
- To encourage the use of modern technologies in learning other languages;
- Where appropriate, to promote the certification of studies under both educational systems.

(Dobson *et al*. 2010: 12)

A key feature of the project is that it operates in state schools, and not in private, fee-paying institutions. From the outset, it was decided that schools involved in the project would represent a range of socio-economic circumstances. The project is based on a whole-school approach, in which an integrated curriculum drawn from both the Spanish and British curricula is taught. There is an emphasis on literacy, with children being taught to read and write in English from an early age, and much of the instruction in English lessons is focused on literacy, as opposed to an English as a foreign language (EFL) curriculum. Substantial time is given to English, with 40% of the curriculum taught in the second language. In this sense, the Project can be seen as a form of EBE (early bilingual education), which can be distinguished from many of the CLIL-type initiatives in Europe. In these programmes, instruction through the medium of a foreign language may start later, with the pupils already literate in L1, and in most cases, less of the curriculum is devoted to instruction in the L2. The authors of the Project evaluation are indeed keen to distinguish the programme from CLIL:

> (…) when thinking of the BEP, I do not consider that the term CLIL is suitable and prefer to stay with the terms 'early partial' immersion or bilingual education. To my mind, what is vitally important and distinctive about early bilingual education (EBE) is that it is, as the term indicates, an education from an early age through two languages. As such, it is concerned not only with the integration of 'language' and 'content', as implied in the term CLIL, nor it is concerned only with learning another subject (or more) through the medium of a foreign language (…) EBE must also primarily be concerned with a child's entire education through two or more languages, including the gradual development of their sense of identity, society and culture from an early age.
>
> (Dobson *et al*. 2011: 7)

Again, we can see a certain lack of agreement in the field of bilingual and multilingual education as to what the acronym 'CLIL' actually covers. Many (if not most) advocates of CLIL would happily include the type of EBE programme of which the BEP is an example under the CLIL umbrella. For example, Mehisto, Marsh and Frigols (2008: 17-19), in describing 'the many faces of CLIL', describe 'total early immersion' which begins in kindergarten and in which all instruction is in the L2 at the outset, as an example of CLIL. It is thus perhaps a matter of preference, and perhaps field building, whether one wants to include programmes like the BEP under the CLIL 'umbrella'. As argued above, rather than disputing whether a programme is 'CLIL' or not, the most objective way of delineating the features of this, or any other, bilingual eduaction initiative, is to use the continua of multilingual education framework.

In terms of the school-based factors, the BEP is situated at the multilingual end of the continuum. English and Spanish are taught as subjects, and in the case of English, the focus is on literacy and on linking the English subject instruction with the other subjects taught through the medium of English. The second foreign language, usually French, is not generally integrated with the rest of the curriculum. Two languages – Spanish and English – are used as languages of instruction, thus placing the schools in the project firmly in the category of what Baker (2006) describes as 'strong' bilingual education, more specifically mainstream bilingual education in two majority languages. Introducing a third language as a language of instruction would move the project significantly along the continuum towards multilingual education. However, as most of the schools in the project are in monolingual regions of Spain (except the Balearic Islands), opportunities for multilingual education are not as readily available as in, for example, the Basque country.

Turning to the 'Teacher' continuum, in the case of the BEP schools, both the teachers of the subjects taught through English, and those of English as a subject, have high levels of proficiency in English. Indeed one significant aspect of the project was the introduction of native-speaking teachers into primary schools, though this has not been a feature of the project as it has moved into secondary level. Another key feature of the BEP has been the curricular guidelines developed with the collaboration of practising teachers and the extent of in-service teacher development provided, something that was

seen as positive in the project evaluation. Thus, the BEP can be said to be a good way along the continuum of multilingual education in this area.

The project is also at the multilingual end of the 'school context' continuum. In the school in which data were collected for this study, English was used in a range of situations outside the classroom. For example, in bilingual department meetings, or in informal exchanges with students in the corridor. In fact it was noticeable to the researcher that pupils would nearly always approach the teachers who taught them in English using this language, for example to enquire about the due date of a piece of homework. English was visible in the 'linguistic landscape' around the school, with many posters and examples of pupils' work, or labelling of rooms such as boys' and girls' toilets.

As for linguistic distance, in the case of the BEP, the two languages, while belonging to different families – Germanic and Romance - are relatively close in terms of the history of contact, and a large shared Latin-based vocabulary. Thus, the BEP is at the less distant end of this continuum, unlike bi- or multilingual programmes in which less related languages such as Japanese and English coexist, or in the Spanish context, schools in which Basque, Spanish and English are used as languages of instruction and/or taught as subjects.

In terms of the 'macro' level sociolinguistic factors, the BEP is at the less multilingual end of the scale. One language, Spanish, has an overwhelmingly massive presence in communication in the home, in the street, or in the media. One significant factor being that nearly all foreign language programmes are dubbed, and Spanish voice-overs rather than subtitles are used when speakers use another language. Indeed, the authors of the Project identified as 'major challenge' for the ongoing success of the Project that of

> being successful in a societal environment in which (as our evidence clearly shows) very little English is accessed by or used by pupils in their lives outside school. This makes the challenge different from that in countries such as Denmark, Finland, Holland, Norway or Sweden where there is much more access to and use of English in society at large.

(Dobson *et al*. 2010: 141)

As was described above, the efforts made by staff in creating a multilingual environment in the school went some way towards meeting this challenge.

At the micro sociolinguistic level, in the case of the BEP, the local language ecologies are clearly towards the monolingual end of the continuum, as they are in regions in which Spanish is the dominant language. In some schools there are immigrants who use other languages, but this is not a highly significant feature of the project schools overall. In the focal school in this study, the local sociolinguistic context is very monolingual, with Spanish used for all purposes among families, friends and neighbours. Again, at the micro level we can see the problem identified by the project evaluators relating to lack of contact with English.

Overall, then, the BEP can be situated more towards the multilingual end of the continua in its educational variables, but less so on the sociolinguistic variables. It responds to social and political demands for a more plurilingual society, at the levels of European cohesion and parental aspiration, and the perceived global role of English. As an educational initiative, it attempts to compensate for the lack of a clear sociolinguistic presence of the target language at both macro and micro levels by creating space in the school curriculum for this language, both as a subject and medium of instruction. In the terms of Baker's typology of bilingual education, it aims for biliteracy and enrichment and an additive bilingualism.

In March 2010, the first major evaluation of the project was presented (Dobson *et al*. 2010). The results were extremely positive, showing overall high attainment in primary and secondary pupils' spoken and written English skills, with no negative effect on secondary pupils' writing skills in Spanish. Pupils at both primary and secondary level generally showed a fluent and confident command of English, using a wide range of functions to deal with different content areas and handling specialised vocabulary. Many students were able to demonstrate learning of cognitively challenging subject matter in English by performing successfully in the IGCSE examination in subjects such as Biology, History and Geography (Dobson *et al*. 2010: 81-83). The authors reported an 'impressive range' of good practice (p.40) at primary level, and a 'wide

range' (p. 54) of good practices at lower secondary. These practices included both general teaching strategies, and language-focused strategies in which there was a focus on form, function and discourse.

On the more negative side, the evaluators noted some areas to which the Project needed to pay attention. One was the concern that while the Project was delivering successful outcomes for 90% of the pupils involved, 10% were not benefitting so much. It thus remains a challenge for the Project to find ways in which the needs of lower attainers can be met. This is particularly important to meet criticisms that bilingual education may only be for an elite of socioeconomically favoured higher attainers, a self-selecting group who would be likely to do well whatever the educational innovation. The evaluators also reported a concern that ICT was not being used to the extent that the Project had aimed for, though they had noted some improvent in this respect. The other issue identified was the 'major challenge', discussed above, of the lack of contact with English outside the classroom.

The evaluators of the MEC/British Council Bilingual Project usefully divide the key factors influencing the outcomes into four groups: societal, provision, process and individual/group factors (see table 2.1). Such a division allows the possibility of seeing that no single factor, or group of factors at the same level, is capable of guaranteeing the success of a bilingual project. For example, provision on its own will not suffice if there is not a political consensus, parental demand, and appropriate roles and statuses in society of the languages in question. Good teaching, at the level of classroom strategies may be a sporadic and hit-and-miss affair if there is not adequate curriculum and materials support, time for both languages and appropriate teacher preparation. Of direct relevance to this study is the mention of general teaching strategies in the L2 and language-focused strategies as process factors. Here we can see two facets of the role of the L2 in the Project: its use as a tool for achieving subject-related learning outcomes, and the importance of using teaching strategies which highlight L2 forms as well as meaning. These two dimensions of the role of the L2 in subject teaching as highlighted in the Project evaluation in fact reflect wider concerns with the role of the L2, and language more generally, in the teaching and learning of curricular content through second or foreign languages.

Societal factors	• Political will for this form of education, extending over 15 years and accommodating changes of government • Parental interest and demand • Widely held view that English as global language is important for the international citizenship of the young people of Spain
Provision factors	• An early start (in some cases from age 3) • Substantial time for education through the medium of English (40%) • Leadership at national level from Ministry and British Council together • Supernumerary teachers fluent in English • Supportive national Guidelines on BEP curriculum • Highly valued in-service courses for teachers • Prestigious external international examination for students at age 16
Process factors	• General teaching strategies • Language-focused strategies, covering grammar and vocabulary, plus the discourse of different school subjects • Creation of community atmosphere in class, in which students collaborate • Activities which offer students cognitive challenge, integrating their knowledge across subjects • Use of assessment in support of learning • Management approach based on consultation and collaboration with teaching colleagues
Individual/Group factors	• Numerous examples of dedication by school staff to the project and commitment to making it succeed • Willingness of students to rise to the considerable cognitive, social and emotional challenge of being educated for substantial periods of time through the medium of an additional language

Table 2.1 Factors influencing success of Bilingual Education Project (Johnstone *et al*. 2010: 144)

2.3 Situating the study: research approaches and findings in CLIL

Early CLIL experiences in Europe in the 1990s were largely a bottom-up, experimental affair, driven by the efforts of committed practitioners. They were not driven by theoretical considerations, but were small-scale interventions responding to local needs. Around ten years ago, Marsh (2002: 70) was able to state that 'the theoretical justification [for CLIL] remains tentative' and that, even though there exists a large body of research on learning through the medium of a second/foreign language, there is still some way to go before there is a 'satisfactory profile' of CLIL research in the

European context. However, he did highlight the growing interest in such research along with 'a wealth of experimentation, and small-scale enquiry, often in the case of monitoring contexts, action research and forms of reflective enquiry, which offer a rich source of information and data.' (Marsh 2002: 70). Some four years later, this situation seemed not to have changed, with Björklund (2006) expressing dissatisfaction with this small scale approach to CLIL and pointing out the need for more soundly-based scientific principles:

> It is important that first experimental phases are backed up with scientific documentation which, if necessary, will help to revise and refine the experiment, and place it in line with the expected outcomes. At the same time thorough scientific documentation stands as a guarantee for not letting different approaches become isolated phenomena and will help others in a similar situation get a better start as well as preventing them from reinventing the wheel.
>
> (Björklund 2006: 193)

Björklund's proposals were a sign that, half-way through the first decade of the new century, there was a growing awareness of the need for more solid theoretical foundations for CLIL practice. It was considered that keeping CLIL as a local practice, meeting local needs, was not enough. CLIL was in expansionary mode. In order to provide these theoretical justifications and foundations, a coherent and unified research effort was necessary. In a 2007 article, Coyle called for a 'connected research agenda' for CLIL pedagogy. Offering her own 4 Cs framework as a tool for analysis, she advocated an ambitious programme of research, which would be 'holistic' and draw on a much wider frame of reference than CLIL research had done until then. She set out an ambitious 7-point programme whch included such proposals as combining different research approaches (bottom-up, top-down, quantitative, qualitative), broadening the theoretical lens to take in wider fields beyond language education, involving a wider range of stakeholders in research, and connecting to related fields such as immersion, EAP, subject teaching and technology-enhanced learning. Significantly, her seventh point in the list signalled an awareness of the need for CLIL, as a fledgling field of inquiry, to lay claim to its own academic territory:

> asserting itself as a field of research in its own right by building up a CLIL

> research base, which takes account of relevant and related research findings, applies these critically and appropriately to CLIL contexts and goes beyond the current boundaries so that new research questions evolve and existing ones are addressed.
>
> (Coyle 2007: 558)

A clear sign that CLIL was indeed beginning to assert itself as a research field was the publication of the edited volume by Dalton-Puffer and Smit (2007).

Dalton-Puffer and Smit (2007) provide a useful framework for categorizing CLIL research. They place approaches to researching CLIL on two intersecting axes: macro-micro and process-product (see figure 2.2).

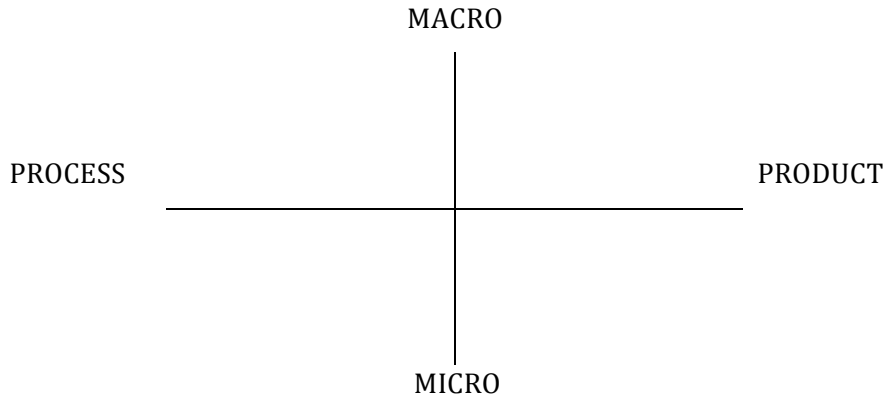

Figure 2.2 Research approaches in CLIL (Dalton-Puffer and Smit 2007: 14)

The macro-micro axis distinguishes studies in terms of how 'close to the action' they are with regard to the phenomena they study. Macro approaches look at large-scale programme factors such as curriculum, teacher supply, age of entry, and time allocated to CLIL. Micro-level studies take a 'close up' view of CLIL from the inside, focusing on the perspectives of CLIL learners and teachers and on what happens in the classroom.

Moving to the other axis, Dalton-Puffer and Smit distinguish between studies which focus on the outcomes of CLIL programmes, and those that try to get inside the 'black box', i.e. to get an understanding of the processes by which these outcomes come about. As Dalton-Puffer and Smit point out, much of the research in CLIL has inhabited the top part of the diagram, with studies focusing on the outcomes of CLIL programmes,

often on the linguistic achievements of students. Indeed, many studies are positioned in the 'macro-product' quadrant, what Leung (2005a) describes as a 'productivity' approach to bilingual education, in which such factors as subjects taught, time allowed for bilingual instruction or teacher characteristics are linked to learner outcomes.

Examples of this 'macro-product' approach are large-scale evaluation studies such as that reported in Lorenzo, Casal and Moore (2010). In their evaluation of the Andalusian Bilingual Sections Programme, they found that primary and secondary pupils in this programme outperformed their non-bilingual peers across the four language skills of speaking, listening, reading and writing. They found that the bilingual pupils also showed gains in structural variety of language use, and most notably, in the use of discourse features typical of academic language, such as hedging, tentative language, hypothesising, impersonal structures and metaphorical grammar (Lorenzo *et al*. 2010: 10). Other studies in Spain, such as those included in Ruiz de Zarobe and Jiménez Catalán (2009) also show gains for students in bilingual or CLIL programmes when compared with peers who receive only EFL instruction. These product-oriented studies often have an SLA-focus, and there has been much interest in CLIL students' attainment in terms of different aspects of language proficiency such as vocabulary, syntax and morphology, pronunciation and affective factors (see studies in Ruiz de Zarobe and Jiménez Catalán 2009, and Ruiz de Zarobe 2011 for a useful review). Ruiz de Zarobe (2011) uses evidence from recent research on students' L2 competence outcomes in CLIL to tentatively suggest an update of Dalton-Puffer's earlier (2007, 2008) list of areas in which gains in L2 competence may be expected from CLIL, and areas where no or few gains have been reported. Areas where gains have been reported are:

- Reading
- Listening
- Receptive vocabulary
- Speaking (fluency, risk-taking associated with low affective filter)
- Writing (fluency and lexical and syntactic complexity)
- Some morphological phenomena
- Emotive/affective outcomes

Areas which seem not to be positively affected by CLIL:

- Syntax
- Productive vocabulary
- Informal/non-technical language
- Writing (accuracy, discourse skills)
- Pronunciation (degree of foreign accent)

(Both lists from Ruiz de Zarobe 2011: 145-6)

Some support for the claim that syntax may not be positively affected by CLIL comes from a study of transfer errors in article use by Spanish CLIL learners by Vázquez Díaz (2010), who argues that content-focused CLIL instruction alone is not sufficient to overcome these problems, and form-focused instruction is needed. Such studies throw light on how CLIL instruction may impact on L2 development, but some areas of attainment have not been addressed, for example outcomes in pragmatic competence. Also, most of these studies compare CLIL and EFL but do not compare the content learning outcomes of CLIL learners with those of their peers learning content through their L1. Comparing CLIL and non-CLIL students can also lead into some methodological and research design problems, which have been pointed out recently by Bruton (2011a, 2011b).

In fact, Bruton (2011a, 2011b) has been more generally critical of methodological and research design issues, which he claims compromise the positive results claimed for CLIL in a range of studies carried out in Spain and elsewhere. Bruton (2011b) reinterprets the results of a range of studies which reported positive outcomes for CLIL students (e.g. Alonso *et al.* 2008; Lasagabaster and Sierra 2009, Ruiz de Zarobe 2007; San Isidro 2010). He uses his re-analysis of the results to make four points about these studies: (1) researcher interest may bias the interpretation of results; (2) some studies are very limited with results questionable in terms of pretesting, sampling, and (lack of) observation data on actual instruction; (3) in most of the studies, the non-CLIL groups start out as less proficient, and possibly less motivated, with the CLIL groups attracting the 'best' students; (4) thus, the rather narrow advantages reported for CLIL students

are not very promising, given that the CLIL students typically start off with higher levels of attainment and motivation.

Bruton raises some legitimate concerns about the reliability and validity of some of these 'product' oriented studies, and it is important that such studies meet stringent research design standards as the kinds of claims they make may have a greater impact on policy and practice than smaller-scale qualitative studies, such as this one. However, this does not obviate the need for more studies of the 'micro-process' type. Leung (2005a) argues that while the 'macro' or 'productivity' approach to researching bilingual education (including CLIL) has produced useful findings, there is a need for more 'close up' interaction data showing how language is actually used in bilingual classrooms. Specifically, he argues that bilingual education research should pay greater attention to two issues:

- the ways languages are actually used in classroom interaction and activities, and
- the demands and affordances of language learning in the context of curriculum subject learning. (Leung 2005a: 239).

He argues that it is not enough simply to know *that* a particular approach to bilingual education 'works' in terms of delivering a set of desired outcomes, but that it is important to know *how* it works, particularly 'at the points where social and curriculum content meanings are communicated, and where opportunities for language development for the individual student may take place.' (p. 239). This recommendation chimes with Dalton-Puffer and Smit's (2007) more detailed description of what a 'micro' approach to researching CLIL entails. For them, a 'micro' approach

> (…) focuses on the immediate participants, i.e. the learners and teachers, trying to find out how they act under the conditions of CLIL, what happens to them, and how CLIL influences their states of mind, that is their cognition, knowledge, emotions, beliefs, opinions and attitudes. A micro view also focuses on the central event where those states are enacted, namely the CLIL lesson and its manifestations (mainly in the shape of classroom discourse).
>
> (Dalton-Puffer and Smit 2007: 12-13)

This is the approach which is used in the eleven studies in Dalton-Puffer and Smit's 2007 edited volume. Many of these studies focus on patterns of interaction in the classroom, such as three-part initiation-response-evaluation exchanges (Bowering 2007; Nikula 2007) or repair behaviour (Lochtman 2007; Smit 2007). Others focus on CLIL teachers' perceptions, such as a study on teachers' views on the strengths and weaknesses of CLIL (Gierlinger 2007) or on the teaching of a specific subject, history, in CLIL (Ziegelwagner 2007).

Beyond this volume, a strong research line in the 'micro' approach has focused on the CLIL classroom as an environment for the development and use of a range of pragmatic functions, particularly directives (i.e. requests for action or information). Studies such as Dalton-Puffer and Nikula (2006) and Nikula (2005) have focused on the possibilities and limitations in different classroom discourse environmemts for the development and use of a range of pragmatic language functions, particularly directives. Dalton-Puffer (2007) and Dalton-Puffer and Nikula (2006) have drawn on Christie's (2002) distinction between two classroom registers to show how each can be a context for pragmatic uses of language. In the 'regulative' register, students and teachers organize the social world of the classroom, for example giving and receiving instructions and clarifying procedures. In the 'instructional' register, teachers and students work directly with academic content. These registers offer different possibilities for using pragmatic functions. For example, Dalton-Puffer and Nikula (2006) suggest that the regulative register is richer in its opportunities for use of context-dependent pragmatic language than the instructional register. Also in the area of pragmatic aspects of CLIL classroom interaction, Maillat and Serra (2009) describe a 'mask' effect in which CLIL learners, by acting out roles in role play, may reduce their inhibitions and therefore 'feel confident to explore the full range of discourse strategies' (p. 201).

The most detailed 'micro-process' study of the discourse of the CLIL classroom is Dalton-Puffer's (2007) book-length treatment. Using the broadly social-semiotic framework of Halliday's metafunctions, this book gives a detailed account of a range of phenomena in CLIL classroom discourse, such as pragmatic aspects of interpersonal language use, the use of academic language functions such as explanations and definitions, and the organization of repair. Overall, the findings of this study suggest that the Austrian CLIL classrooms were a rather limited environment for the use of a

wide range of language functions, particularly due to the extensive use of the three-part IRF structure. She somewhat pessimistically concluded that 'The bread and butter of Austrian CLIL classrooms is obviously facts, facts, and facts.' (Dalton-Puffer, 2007: 125). She also noted a lack of explicit focus on language, with opportunities being lost to, for example, point out the features of common academic language functions such as definitions. In a later paper, Dalton-Puffer trenchantly argues that CLIL stakeholders are in need of a 'reality-check' (2009: 201) as to the constraints and affordances of the focal event in CLIL, the CLIL lesson, for the development of communicative competence, however loosely or more tightly defined. The 'micro-process' studies reviewed here suggest that there is in CLIL the kind of 'weakly-framed' or 'diffuse' approach to language described earlier in this chapter. Language learning is assumed to happen 'naturally', without any explicit focus, or detailed understanding of just what it is that makes CLIL classrooms effective environments for language learning.

Another line of CLIL research which focuses on the micro level, but may be more towards the 'product' end of the scale, uses a combination of corpus linguistics and systemic functional linguistics to analyse the spoken and written language output of CLIL learners. In a series of studies, Llinares and Whittaker (e.g. Llinares and Whittaker 2007; Whittaker and Llinares 2009) have produced findings that show how CLIL learners use such aspects of language as modality and circumstantial elements in expressing the meanings of secondary CLIL social science. An important feature of this research line is that it takes a longitudinal approach, by collecting data on CLIL learners' spoken and written output throughout the four years of compulsory secondary education. In a related study, Llinares and Morton (2010) showed how CLIL learners differently produced spoken explanations of history content in two discursive environments: the classroom and an individual interview. Other micro-oriented research that takes a broadly systemic functional perspective on the CLIL classroom uses the concept of 'genre', that is, the culturally-relevant forms in which academic content is expressed, to show how CLIL learners can gain academic literacy. Morton (2009, 2010) shows how genres are implicit in CLIL history lessons, and suggest ways in which the concept could be harnessed to enhance CLIL instruction in terms of both academic literacy and classroom interaction.

More recently, a more socially-situated perspective is beginning to emerge in 'micro-process' studies of CLIL classrooms. In this perspective, based on ethnomethodology and conversation analysis, learning is seen in non-cognitivist terms as appearing in the socially-situated action of participating in talk-in-interaction. An early study to take this perspective on CLIL/immersion classrooms is Pekarek Doehler and Ziegler (2007). This study focuses on the sequential organization that emerges as participants move between 'doing science' and 'doing language'. This approach questions assumptions about the relationship between content and language. Language is not seen as a system of linguistic forms to be acquired, nor as a vehicle for the transmission of knowledge. Rather, the focus is on the methods the participants themselves use in 'doing science' and 'doing language', and how these are realised in patterns of interaction. Within this situated perspective on learning, Evnitskaya and Morton (2011) combine Wenger's (1998) model of communities of practice with conversation analysis to show how teachers and learners use talk-in-interaction to build such communities in two CLIL science classrooms.

In sum, this review points to a disjuncture between the macro and micro orientations in CLIL research. While the macro-level product-oriented approaches generally report positive outcomes in terms of linguistic, subject-matter and affective dimensions, the micro approaches reveal a rich variety of local practices and perspectives, but a lack of theoretical understanding of the nature of the processes participants are involved in. It seems that CLIL 'works' in terms of outcomes, but no one really nows 'why' or 'how'. This may be seen by some as unproblematic, as long as the results are positive, but such 'blackboxing' is unhelpful where CLIL practitioners and stakeholders need an understanding of the processes involved in doing CLIL, so that, in Puchta and Potter's (2004) terms, they can turn practices into strategies. This thesis aims to contribute to such understandings.

In terms of this thesis, at one level, it can be seen as positioned in the 'micro-process' quadrant of Smit and Dalton-Puffer's framework. It is worth revisiting their precise description of the 'micro' approach, as it pinpoints some of the essential concerns of this study. The focus is on one category of 'immediate participants', i.e. the teachers, though the learners are always present, either in the teachers' descriptions of practice, or in their interactions with learners in the classroom. The study is most definitely

concerned with how the teachers 'act under the conditions of CLIL, what happens to them, and how CLIL influences their states of mind, that is their cognition, knowledge, emotions, beliefs, opinions and attitudes', but, as will be seen later in this thesis, its take on the 'mental' phenomena is rather different from the broadly cognitivist approach of most studies on teaching. The thesis, while it uses a range of verbal commentary data, has as its main focus 'the central event where those states are enacted, namely the CLIL lesson and its manifestations (mainly in the shape of classroom discourse)'.

2.4 Chapter summary and conclusion

The purpose of this chapter was to situate the study in two ways, one relating primarily to practice, and the other to research: first, the programme under study, the Bilingual Education Project (BEP) was described using Cenoz's (2009) continua of multilingual education; second the thesis was positioned as a contribution to CLIL research, occupying a space overlapping with Dalton-Puffer and Smit's 'micro-process' approach. Dalton-Puffer and Smit's framework was used to situate some main lines of CLIL research, and it was argued, with Leung (2005a), that there was a need for more 'close-up' research on what actually happens in bilingual, including CLIL, classrooms. The chapter ended by positioning this thesis as a contribution to this research effort, with specific emphasis on CLIL teachers and their practices and understandings. These practices and understandings are focused on language in three dimensions, or domains: language as a tool for learning, as a curriculum concern, and as a matter of competence. These domains of language are the topic of the next chapter, which reviews ways in which language has been a focus of attention in CLIL and other related approaches.

Chapter 3. A triperspectival conceptualization of the roles of language in CLIL

3.1 Introduction

Section 2.3 in the previous chapter used Dalton-Puffer and Smit's (2007) framework to give an overview of the types of research that have been carried out in CLIL, and their results. This chapter narrows the focus by reviewing the research on CLIL and other related approaches as language education initiatives. It sets out to show how CLIL as a pedagogical option has been driven by language learning concerns. That is, that CLIL is justified not by any belief that learners will achieve better subject-matter learning outcomes by studying in a foreign language (although that may happen), but by the perceived necessity to improve overall levels of L2 competence by making more room for the foreign language in the curriculum. As Dalton-Puffer (2007: 295) puts it, 'Why should we be doing CLIL at all if there are no language goals present?' Marsh (2008: 244) provides a clear statement of the centrality of language in CLIL, and the resulting responsibilites for teachers:

> When CLIL is incorporated into the curriculum, language takes its position at the centre of the whole educational enterprise. Teachers consider themselves to be responsible for language development to a greater or lesser extent, even if the language focus takes a secondary role to content.

If language is central to the CLIL enterprise, with teachers responsible to at least some extent for their learners' language development, then there is a need for them to engage with knowledge about language and how it is used and learned in the context of studying school subjects. The purpose of this chapter is to review the literature on how language and second language learning have been conceptualized in scholarly writing about CLIL and other related content-based pedagogies such as immersion. In doing so, a triperspectival conceptualization of language as a phenomenon in CLIL teaching is adopted, with the literature reviewed according to each perspective on language.

The first perspective is the L2 as a tool for learning, taking in research which most relates to the content dimension of the CLIL acronym, that is how L2 talk-in-interaction is used to mediate content learning goals, but also including studies which have examined CLIL and content-based classroom interaction as a setting for achieving language learning goals. The second perspective is that of L2 as a curriculum concern, the ways in which aspects of the L2 are identified for explicit focus and integrated with content learning goals. The third perspective is the L2 as a matter of competence, which refers to how learners' L2 communicative competence and proficiency can be expected to develop in CLIL, and the types of interventions which may foster such development. Each of the three perspectives on language which structure the present study relate to three main 'roles' of language in CLIL, as described in Llinares, Morton and Whittaker (2012): language in classroom interaction, language as subject-specific literacies, and language seen from the perspective of learners' development . The overall purpose of the chapter is to show how these three strands in the ways in which the L2 and L2 learning have been conceptualized in CLIL and related approaches can form a triperspectival model of language for CLIL, which can then be related to teacher language awareness for CLIL (TLA-CLIL) in the following chapter, and throughout the rest of the study.

3.2 The L2 as a tool for learning in CLIL

The perspective which sees the L2 as a tool for learning in CLIL classrooms involves examination of the processes through which curricular content and activities are mediated through talk-in-interaction and different classroom participation structures. Given that the focus is on the mediational, or instrumental, role of the L2 as a *tool*, it overlaps partly with Coyle's (2007) notion of language *for* learning, that is, 'the kind of language which all learners need in order to operate in a foreign language using environment' (2007: 553). Coyle (2011) sees language as a learning tool as encompassing all three aspects of the language triptych (language *of*, *for* and *through* learning). In this study, however, language as a tool for learning refers to the interactional and discursive practices through which pedagogic goals are pursued in classroom discourse, and the different theoretical perspectives which have been used to investigate them. Thus, the focus is on the *discursive* demands and affordances of CLIL

classrooms, rather than purely *linguistic* ones (Barwell 2012). Barwell defines *discursive demands* as 'the forms of interaction arising in classrooms through which second language learners, along with their interlocutors, jointly produce both cognition and context' (2012:153). In this sense, seeing the L2 as a tool for learning involves a close engagement with theories which have sought to explore the role of discourse and interaction in mediating content knowledge and skills. It thus involves an examination of the research into classroom talk in the wider educational and language teaching literature, at the same time as assessing its relevance for the particular concern of CLIL: the mediation of content knowledge and skills through a foreign language. In this section, then, I review the main research paradigms and methodologies which have been used to investigate classroom discourse and interaction in content classrooms, drawing out their relevance for understanding of the role of the L2 as a tool for learning in CLIL classrooms.

3.2.1 Sociocultural perspectives on language as tool for learning in classrooms

The most influential theoretical paradigm for the exploration of the relationships between classroom talk and learning is what can be broadly described as the sociocultural perspective. Arising out of the work of two Soviet scholars, Vygotsky and Bakhtin, this perspective sees both language and learning as essentially social and cultural phenomena. Work within the Vygotskian and neo-Vygotskian tradition places an emphasis on the relationships between intra-mental and inter-mental phenomena, exploring how participation in activity with more expert others influences the development of more advanced cognitive functions. Interestingly, and of relevance to CLIL, Vygotsky pointed out that learning the social language of a school subject is like learning a foreign language. As he put it, 'The process of acquiring scientific concepts reaches far beyond the immediate experience of the child, using this experience in the same way as the semantics of the native language is used in learning a foreign language.' (1986: 161). Scholars working in the Bakhtinian tradition focus on learning as an essentially dialogic process, an interplay of different voices which can be appropriated but which are never totally one's own (Wertsch 1991).

According to Mercer (2010), work using a sociocultural perspective on classroom talk addresses research questions such as:

- How does dialogue promote learning and the development of understanding?
- What types of talk are associated with the best learning outcomes?
- Does collaborative activity help children to learn, or assist their conceptual development?

(Mercer 2010: 2)

It can be seen from these questions that work on language as a tool for learning from a sociocultural perspective has a strong interventionist leaning, in that it is concerned with identifying ways in which classroom talk can be better used to meet pedagogical goals. One such goal is that of 'thinking together' and this is a prominent strand in such research, in which students are provided with 'ground rules' for talking together in ways which can lead to improved learning outcomes (Mercer 2000; Mercer and Littleton 2007). Much of this research has its origins and inspiration in the work of Barnes, who was a pioneer in investigating the ways in which different classroom 'communication systems' provided or hindered opportunities for learning. As he put it:

> The communication system that a teacher sets up in a lesson shapes the roles that pupils can play, and goes some distance in determining the kinds of learning that they engage in. (Barnes 2008: 2)

In line with the interventionist tendency of the sociocultural approach, researchers inspired by the work of Barnes seek to raise teachers' awareness of the types of communication systems they use in the classroom and their possible effects on their students' learning outcomes. A prominent example of this type of work is that of Mortimer and Scott (2003), who developed a framework for the planning and analysis of secondary science teaching sequences. Drawing on and adapting Bakhtin's concept of dialogism, they identified four types of 'communicative approach' in which talk could be more or less interactive in terms of who had the opportunity to speak, and more or less dialogic in terms of whose points of view were taken into consideration.

Dialogism, or dialogic teaching has had a much wider application within the sociocultural perspective than Mortimer and Scott's focus on secondary science teaching. Alexander (2001; 2008), drawing on a wide-ranging study of international educational practices at primary level, builds a case for an overall dialogic approach to teaching. In this approach, classroom talk as a dialogic tool for learning needs to have a set of essential characteristics. It is:

- *collective:* teachers and children address learning tasks together, whether as a group or as a class;
- *reciprocal:* teachers and children listen to each other, share ideas and consider alternative viewpoints;
- *supportive:* children articulate their ideas freely, without fear of embarrassment over 'wrong' answers; and they help each other to reach common understandings;
- *cumulative:* teachers and children build on their own and each other's ideas and chain them into coherent lines of thinking and enquiry;
- *purposeful:* teachers plan and steer classroom talk with specific educational goals in view.

(Alexander 2008: 38)

Such a view of language as a tool for learning goes well beyond the concerns of any one subject, and has relevance for all educational levels. As can be seen in the third bullet point, it resonates with earlier work in sociocultural theory which sees pedagogy as largely a matter of building joint understanding (Edwards and Mercer 1987). Also in line with the general tendency in the sociocultural perspective, it takes a strong interventionist position, as in the final bullet point in which teachers are seen as agents who can 'steer' classroom talk in ways that will meet their pedagogical goals.

Another prominent sociocultural researcher who highlights the importance of a dialogic perspective on classroom talk and learning is Wells (Wells 1999, 2002; Wells and Mejía Arauz 2006). Wells' work draws largely on two main theoretical perspectives: cultural-historical activity theory (Leont'ev 1981) and Hallidayan systemic functional linguistics (Halliday and Matthiessen 2004). One aim of such work is to show the relationships

between teachers' use of different 'discourse formats' and the establishment of a 'dialogic stance' (Wells and Mejía Arauz 2006). Again, we can see the importance of teacher agency in that by choosing certain interactive and discursive options in classroom talk, teachers can have a powerful effect on the creation or otherwise of learning opportunity. Of relevance to CLIL, Wells is a contributor to one of the relatively few studies that have extended the dialogic approach to classrooms in which the students are second language learners. Haneda and Wells (2008) argue that dialogic teaching is an essential pedagogic strategy in classrooms where students are learning content in an additional language. They base this argument on three main reasons, which are summarized below (based on Haneda and Wells, 2008: 118-19):

1. By encountering the new language in use, they not only receive comprehensible input by understanding messages in the L2, but they also have opportunities to produce 'comprehensible output' (Swain 2005), in the form of longer and more complex contributions as they participate actively in discussions.
2. By using their language resources to contribute to the ongoing dialogue, they also learn appropriate social and communicative strategies (for example, when and what to contribute, how to express their ideas appropriately) for accessing academic content and being recognised as legitimate members of the classroom community.
3. By taking part in dialogic interaction, language learners come into contact with alternative perspectives on different topics, in the voices of students as well as the teacher. They learn different ways of expressing ideas and to use language for negotiation, such as when they agree or disagree with someone. This contact with different voices creates linguistic redundancy as students encounter different ideas and the same ideas expressed in different ways.

Haneda and Wells present a strong argument, which convincingly shows the relationships between the use of an L2 as a tool for learning and opportunities for L2 development. In CLIL research, it resonates with Nikula's (2005) comparative study of CLIL and EFL classrooms, in which the CLIL classrooms afforded more space for dialogic interaction and engagement around meaningful topics than the EFL classrooms, in which interaction focused on materials and concerns which were more distant from the students' immediate reality. Also in a CLIL context, Moate (2011) applies a

sociocultural perspective in characterizing the 'talkscape' of the CLIL classroom as comprising seven talk-types (organizational, social, critical, exploratory, expert, meta and pedagogic). She introduces the notion of a 'transitional dynamic' to represent the idea that while a goal of CLIL is to increase the use of the additional language in teaching and learning activity, the transition to the use of the L2 can occur at different rates for different talk types.

3.2.2 Systemic functional and discourse analytical perspectives on classroom discourse

Although much important work on classroom discourse from a sociocultural perspective does not use detailed linguistic or discourse analyses (e.g the work of Mercer or Mortimer and Scott), other researchers working in this framework have drawn on systemic functional linguistics (SFL) to provide richer descriptions of the linguistic and discursive resources used in making meaning in classrooms. A good example is Lemke's (1990) work on language use in science classrooms, in which he used interactional analysis and SFL to explore the relationships between interactional formats and the semantics ('thematics' in his terms) of science content. Wells (1996, 1999, 2007) has combined Vygotskian sociocultural theory with the systemic functional concept of genre to explore the roles of what he calls 'discoursing' in mediating educational activity. Gibbons (2002, 2003, 2006) has used systemic functional linguistics to explore language as a tool for learning in second language education contexts. Her work has focused on how primary ESL learners in mainstream classrooms in Australia cope with the demands of learning academic content in English as a second language. Gibbons' work has a strong sociocultural perspective, particularly in its use of the metaphor of scaffolding, but it draws mainly on Hallidayan systemic functional linguistics. In Gibbons' work, the L2 as a tool for learning is seen as having a mediating or 'bridging' function (Gibbons 2006) in which the task is to scaffold the ESL learners' appropriation of not only the subject-matter concepts and skills, but the appropriate L2 registers in which to construe meaning. A key notion in Gibbons' work is that of the 'mode-continuum' (Martin 2001), which she uses to describe how the L2 used in the classroom shifts from a more context-embedded spoken mode, to a less context-embedded and more academic written mode (Gibbons 2003).

While Gibbons' work is in a rather different educational and sociolinguistic context to European foreign-language CLIL, the issues it raises are highly instructive for an understanding of how the L2 gets used as a tool for learning in this context. CLIL learners are also faced with the task of using both the spoken and written modes in classroom discourse to construe the meanings of relevance to the different academic subjects. They need to use the L2 in classroom talk to shift between their everyday experiences and the more academic language through which content knowledge is construed (see Llinares, Morton and Whittaker 2012). In using the L2 as a tool for learning, the CLIL teacher needs to establish and maintain the 'communication systems' through which this can be achieved.

Also within systemic functional linguistics, Christie (2002) has used a broad interpretation of the notion of genre to describe 'curriculum macrogenres', longer teaching sequences which can extend over several lessons, and which go through stages, in themselves genres, through which classroom talk is used to orient students to tasks, tasks are carried out and the sequence is closed. Christie draws on Bernstein's (1996) notion of pedagogic discourse to identify two main ways in which language is used as a tool for learning in classrooms: the regulative register through which order and control are maintained, and the instructional register through which subject-related knowledge and skills are communicated. Using a concept from systemic functional grammar, she describes the first register as 'projecting' the latter, in a way that is analagous to Bernstein's claim that the instructional register is embedded in the regulative. In CLIL research, Llinares, Morton and Whittaker (2012) have used the framework of the regulative and instructional registers to show how CLIL teachers regulate the social world of the classroom and communicate about subject-matter content. Using another set of concepts from Bernstein's work - horizontal and vertical discourses (Bernstein 1999), they show how, within the instructional register, classroom talk shifts between more everyday (horizontal) knowledge and more technical or scientific vertical knowledge.

Another line of classroom research which shares many of the theoretical foundations of SFL is the Birmingham School of Discourse Analysis (Trappes-Lomax 2006). Sinclair and Coulthard (1975) developed a complex hierarchical framework consisting of acts, moves, exchanges and transactions for analysing classroom talk. By far the most

influential and lasting construct from their model is the IRF exchange, a three-part sequence in which the teacher initiates by asking a question or eliciting information, students respond, and the teacher follows up often with an evaluative move. This structure was also identified by Mehan (1979) as the initiation-response-evaluation (IRE) sequence, and by Lemke (1990) and Nassaji and Wells (2000) as 'triadic dialogue'. This exchange was seen to be prevalent in Sinclair and Coulthard's study, and was taken up by other researchers who found it to be an extremely frequent structure of classroom talk in many educational contexts. A good many early studies of classroom discourse decried the ubiquity of the IRF pattern, seeing it as limiting students' opportunities to engage with content learning and participate fully in classsroom talk (e.g. Dillon 1988; Wood 1992). One aspect of the IRF pattern which came in for sharp criticism was the use of 'display' or 'known answer' questions, that is, questions to which the teacher already knew the answer. However, in more recent work, the IRF pattern has been undergoing something of a rehabilitation, with applied linguists working in both general education and language teaching pointing out that IRF patterns need to be seen in the context of teachers' wider pedagogical goals, and how they form part of teaching sequences or curriculum macrogenres extending over longer periods of time (Christie 2002). Other researchers have focused on the ways in which the third, follow-up move can have functions well beyond simple evaluation of learners' output, and can provide a context for much more dialogic interaction in which learners' ideas are extended and elaborated on (Cullen 2002; Jarvis and Robinson 1997; Nassaji and Wells 2000).

In CLIL classroom discourse studies, the findings on the use of the IRF pattern have been somewhat mixed. Nikula (2005), in a study comparing CLIL and EFL classrooms, found that the interaction in the CLIL classrooms was less rigidly controlled than in the EFL classrooms, with the CLIL classrooms providing more space for dialogic interaction. However, Dalton-Puffer, in her 2007 study of Austrian CLIL classrooms found a preponderance of restrictive IRF exchanges initiated by teacher display questions. However, as noted above in the context of non-CLIL classroom discourse studies, it is necessary to approach such fndings with caution, as IRF exchanges need to be seen in relation to teachers' pedagogical purposes and over longer periods of time. There is also the question raised by conversation analysis-based studies of the reliability

of coding interactional sequences as IRF, as this does not afford an emic perspective on the actions from the participants' point of view (see Seedhouse 2004: 58-62).

Turning to CLIL research on classroom discourse, there have been mixed results about the effectiveness of these classrooms as environments for learner participation and engagement. As indicated above, Nikula's (2005) findings are rather optimistic about the CLIL classrooms in her study as environments for meaningful participation and the expression of a wider range of pragmatic functions. In her comparison of EFL and CLIL contexts, interaction in the EFL classrooms was seen as rather limited, with

> students using English for a rather restricted set of pragmatic functions in both the lower and upper secondary EFL settings: they mainly answer the teacher's questions or those presented by other classmates based on the teaching materials (e.g. in the form of ready-made questions in exercise books).
>
> (Nikula 2005: 49)

However, in the CLIL classrooms, learners were much more actively involved in asking information-seeking questions, negotiating meaning, and using a wider range of pragmatic functions. Nikula points out that the practical nature of the activities and the use of pair and group work, along with the teacher's handling of the discourse, prevented the interaction from becoming 'an initiation–response–feedback sequence typical of classroom discourse' (p. 51). These findings have important implications for research into CLIL classroom interaction, as the type of subject-matter pedagogy will have a strong impact on the opportunities for participation in L2 interaction. This applies not only to differences between EFL and CLIL, but also within CLIL teaching of the same subject, as Evnitskaya and Morton (2011) show in the case of CLIL biology, where the discursive demands and possibilities can be very different depending on whether students are participating in hands-on lab work or a teacher-fronted classroom discussion. In the setting of this study, the Bilingual Education Project (BEP) in Spain, there was a strong emphasis on student-centred pedagogy and 'hands-on' teaching, which could be expected to be reflected in the ways in which L2 interaction mediated opportunities for both subject-matter and language learning.

In another important study of discourse and interaction in CLIL classrooms, Dalton-Puffer (2007) came to rather different conclusions about their efficacy as contexts for L2 development. In her book-length treatment, she gives a detailed account of a range of phenomena in CLIL classroom discourse, such as pragmatic aspects of interpersonal language use, the use of academic language functions such as explanations and definitions, and the organization of repair. Overall, the findings suggest that the Austrian CLIL classrooms were a rather limited environment for the use of a wide range of language functions, particularly due to the extensive use of the three-part IRF structure. She somewhat pessimistically concluded that 'The bread and butter of Austrian CLIL classrooms is obviously facts, facts, and facts.' (Dalton-Puffer, 2007: 125). She also noted a lack of explicit focus on language, with opportunities being lost to, for example, point out the features of common academic language functions such as definitions.

Both Nikula and Dalton-Puffer have focused on CLIL classroom interaction as a setting for the use of a range of pragmatic features in the L2. Although the development of learners' ability to use pragmatic features of the L2 is dealt with as a matter of competence in section 3.4 below, it is important to address this area as an aspect of CLIL classroom interaction, and the opportunities it may or may not provide for the use of pragmatic functions, particularly directives. Dalton-Puffer (2007) and Dalton-Puffer and Nikula (2006) draw on Christie's (2002) distinction between the regulative and instructional registers to show how each can be a context for pragmatic uses of language. They show how the two registers offer different possibilities for using pragmatic functions in CLIL classroom interaction. For example, Dalton-Puffer and Nikula (2006) suggest that the regulative register is richer in its opportunities for use of context-dependent pragmatic language than the instructional register. They show that a combination of factors in classroom interaction impacts on the opportunity to use pragmatic functions such as directives. For example, the object of a request - whether it is for information or action - will play a crucial role. In classrooms it is not usual for students to ask teachers to carry out actions, but it is quite normal to ask for information about procedures in the regulative register (Dalton-Puffer and Nikula 2006: 259-60). Also, as discussed above, the format of the activity - whether whole class or group work - will have an impact. As Dalton-Puffer and Nikula point out, group work allows opportunities for students to issue directives for action to each other (2006: 260). Also

in the area of pragmatic aspects of CLIL classroom interaction, Maillat and Serra (2009) describe a 'mask' effect in which CLIL learners, by acting out roles in role play may reduce their inhibitions and therefore 'feel confident to explore the full range of discourse strategies' (p. 201).

3.2.3 CLIL and content-based classrooms as interactional spaces for L2 development: the mainstream SLA perspective

Another way in which L2 interaction in CLIL classrooms can be seen as a mediating tool for learning is to consider the ways in which content-based classrooms have been characterised in the SLA literature as spaces for the promotion of L2 development. Section 3.4 in this chapter will examine in more detail the different conceptions of learners' L2 competence and how it may develop in L2 content classrooms. Here, the focus is on the CLIL and content-based classroom as an interactional space for engagement and participation in ways that may encourage L2 development. In general, studies from an SLA perspective on content-based classrooms have been rather sceptical about the benefits of interaction in these classrooms for second language acquisition, as can be seen in the studies reviewed below.

In studies on French immersion classrooms in Canada, doubts have been expressed as to whether the kinds of interaction found in content classes are favourable for L2 development. In an influential early study, Swain (1988) made a strong claim that good content teaching is not necessarily good language teaching. She found that in French immersion classrooms:

- The language used by the teachers was functionally restricted (for example in terms of sociolinguistically approprate uses of 'tu' and 'vous' and in verb tenses);
- Correction of content was given priority over correction of form in order to maintain the flow of communication;
- The messages the students receive about form-meaning relationships are inconsistent;
- The students have limited opportunites to engage in extended discourse.

Swain's conclusion is that content teaching needs to be 'manipulated' in certain ways so that L2 interaction in these classrooms can address the problems she identifies and so that content teaching can be better language teaching. Among her suggestions are the engineering of contexts which demand the use of specific, otherwise infrequent uses of language, the use of strategies which encourage learners to reflect on what they say and help them to choose more accurate and appropriate L2 forms, and using content learning activities which 'demand longer, more complex, and coherent language from the learners' (Swain, 1988: 81).

Swain's criticisms of immersion classes as interactional contexts for L2 development have been echoed in studies of other content-based L2 learning contexts. In a study of an Italian content-based classroom, Musumeci (1996) was critical of the lack of opportunity for negotiation in teacher-learner interaction that the context afforded:

> The data reveal that the teachers in the third semester content-based Italian course speak more, more often, control the topic of discussion, rarely ask questions for which they do not have answers, and appear to understand absolutely everything the students say, sometimes even before they say it! One might conclude from these findings that teachers are a loquacious, manipulative, power-hungry bunch of know-it-alls…
>
> (Musumeci 1996: 314)

Pica (2002, 2005) reflects a common criticism of content-based instruction, that is, that it does not provide a context in which students can modify their output syntactically or receive feedback on their grammatical accuracy. In her 2002 paper she gives this description of the shortcomings in this respect of content-based instruction:

> Subject-matter content (…) provided a meaningful context for students' exposure to the form and meaning relationships they had yet to master. However, the discussion, as the most frequently implemented interactional activity in these classrooms, did not promote the kinds of interaction that could draw attention to these relationships. Instead, it provided a context for the

> students to sustain lengthy, multi-utterance texts, whose comprehensibility of message meaning provided little basis for negotiation, form-focused intervention, and form-focused instruction.
>
> (Pica 2002: 16)

Interestingly, Pica's criticism of the kind of discourse found in the content-based classrooms she studies is in many ways the opposite of what Swain criticised in her 1988 study. For Swain, interaction in the immersion classrooms provided few opportunities for extended discourse in the L2, with only 14% of utterances produced by students in grade 6 classrooms being longer than a clause (Swain 1988: 70). However, for Pica the problem is that the learners produce *too much* meaning-focused discourse, which, echoing Musumeci's point, was too easily understood by all.

Findings concerning a lack of negotiation and extended responses from learners are mirrored in a study carried out in another context in which subject matter is taught through the medium of a second language. In a study of English as an additional language (EAL) pupils in mainstream secondary subject classes in England, Cameron, Moon and Bygate (1996) found that pupils often produced minimal or superficial responses in language that was not cognitively complex, did not use appropriately precise vocabulary, or did not use appropriately complex language in contexts that required negotiation such as group work tasks. These findings can be linked to later studies by Leung (2001) and Creese (2005) of the practice of 'mainstreaming' EAL learners in the UK in ordinary subject lessons in which there is little or no attention paid to their language learning needs. Leung's criticism of the L2 in these contexts as a 'diffused curriculum concern' is taken up in the next section, where the focus is on the L2 as an integrated part of the CLIL curriulum.

Overall, then, the literature review in this section suggests that L2 interaction in CLIL and other content-based classrooms may afford a promising setting for the development of a wider range of pragmatic functions and the expression of meanings that are more relevant to the here-and-now reality of the students. However, from an SLA perspective, L2 interaction in CLIL and other content-based classrooms may have severe limitations in terms of offering a context for language growth in the sense of strengthening form-meaning relationships. Pedagogical options for integrating a focus on L2 forms with

content-based instruction, particularly Lyster's (2007) 'counterbalanced approach' are discussed in section 3.3, where the focus is on the L2 as a curriculum concern. Meanwhile, we turn our attention to an alternative way of looking at language as a mediating tool for learning in CLIL and other content-based approaches.

3.2.4 An alternative approach to the mediation of content and language learning through L2 interaction in CLIL classrooms: learning as a socially situated practice

Both the sociocultural approach in general education and the mainstream SLA approach in language learning have serious limitations as overall frameworks for understanding how L2 talk-in-interaction can be used as a mediating tool in the activity of subject learning through CLIL. The sociocultural approach, while originating in Vygotsky's powerful theorising about the relationships between culture, society, language and thought, does not provide a framework for describing the detail of language use. The mainstream SLA approach, while highlighting the importance of such constructs as input, output, focus on form(s) and the negotiation of meaning, is blind to the relationships between different disciplinary-based content pedagogies and the opportunities for language use. Sociocultural perspectives on SLA (e.g. Lantolf and Thorne 2006) have an interesting contribution to make to understanding the processes of mediation in L2 development, and thus may be more promising for exploring L2 development in CLIL than more mainstream approaches. However, even the sociocultural approach to SLA lacks a comprehensive theory of language and communication (Mitchell and Myles 2004: 220). Of the approaches reviewed above, only the systemic functional model has the potential to build bridges between these two concerns, but this model is only beginning to be used in second language contexts (Martin 2009). Also, the strength of the SFL approach is more in the area of subject-specific literacies, that is, the text types (genres) and lexico-grammatical realisations (registers) of the language needed to express content-related meanings. It is for this reason that further discussion of the SFL framework is left for the section in which the L2 is considered as a curriculum concern, that is, on which content-related aspects of the L2 are identified for inclusion in CLIL syllabuses and integrated with content-learning objectives.

An alternative approach to overcoming the dichotomy between a sociocultural emphasis on content pedagogy and an SLA perspective on L2 development, is to adopt a socially-situated perspective on language and learning. In this perspective, language, rather than being seen as an abstract system which develops in individual minds, is a set of meaning-making resources which are assembled on the spot as people engage in concrete, practical activity. Learning is seen in non-cognitivist terms as appearing in the socially-situated action of participating in talk-in-interaction. Within this overall socially-situated perspective, two main strands can be identified. What could be described as a more theoretically 'purist' approach sticks closely to its origins in ethnomethodology and conversation analysis, eschewing what is seen as the introduction of 'exogenous' theory to describe interaction and learning (see, for example, Hauser 2011 and Markee 2008). The second strand is more open to combining a micro-analytic approach drawn from conversation analysis with the type of anthropologically-based situated learning theory found in work on legitimate peripheral participation and communites of practice (e.g. Lave and Wenger 1991; Wenger 1998). Prominent representatives of this line of research are Hellerman (2008) and Pekarek Doehler (2010).

Both strands of this socially-situated perspective have been gaining ground over the last 15 years in second language research, to the extent that there has been what Block (2003) describes as a 'social turn' in the field of SLA, with the concept of the 'social' being extended to take in a much wider range of phenomena than before. Largely responsible for this shift in perspective was Firth and Wagner's (1997) article which critiqued the prevailing view of discourse and communication in SLA for being 'individualistic and mechanistic' and for failing 'to account in a satisfactory way for interactional and sociolinguistic dimensions of language' (p. 285). They questioned the individualistic cognitive assumptions underlying well known SLA constructs such as communicative strategies, the idea of the 'learner' as a kind of deficient native speaker, the concept of 'interlanguage' as an underdeveloped version of native speaker competence, and the idea that conversational modifications are necessarily triggered by perceived deficiencies in non-natives' output. The article called for a shift in perspective which would see language as 'fundamentally a social phenomenon, acquired and used interactively, in a variety of contexts for myriad practical purposes' (p. 768).

Since Firth and Wagner's seminal article, there has emerged a new sub-field in SLA and second language pedagogy research, that of CA for SLA. In this type of inquiry, a conversation analysis methodology is used to examine how people use, and learn, additional languages in and through social interaction. These studies set out to show, through fine-grained analyses of interaction as it unfolds, turn-by-turn, in real time, the competences and orientations displayed by speakers as they participate in situated L2 interaction, whether inside or outside 'instructed' contexts. 'Learning' is reconceptualised as an interactive phenomenon (see the collection of papers in Seedhouse, Walsh and Jenks 2010) which is visible in the micro-processes of social interaction, and not principally located 'inside the skull' (Kasper 2009). Learning is also seen as changes in participation patterns over time, for example in the ways in which people accomplish certain tasks that are important to the communities they are involved in. The broad research concerns and questions addressed in this approach are succinctly stated by Pekarek Doehler (2010: 120):

- How does the accomplishment of L2 talk-in-interaction and L2 speakers' participation in talk change across time?
- How are changes in linguistic form and in other semiotic means embedded in (changes in) the accomplishment of talk and participation?

An example of work which addresses these types of questions is Hellerman (2008), which examines how adult learners in an ESOL class start working on and disengage from task-based interactions. The study traces the trajectories of individual students, showing changes over time in the ways in which they use the L2 to carry out such social actions as starting to engage with a task. A further example is Markee's (2008) study in which he proposes a methodology for the use of CA in tracking L2 learning over time. The method includes two types of analysis: learning object tracking (LOT), which documents the appearance of learning objects (e.g. vocabulary items or aspects of verb morphology or pronunciation) over a time period such as a term; and learning process tracking (LPT), which involves the analysis of interactional sequences in which participants shift attention to these objects, and possibly incorporate them into their communicative repertoires.

Another highly influential study which uses a CA methodology is Seedhouse's (2004) monograph, which sets out not to conceptualise learning as such, but to provide a comprehensive description of the 'interactional architecture' of the L2 classroom. He shows that the L2 classroom, far from being a single unified context, is a site of variable and dynamic 'micro-contexts' whose interactional organization is reflexively related to the teacher's pedagogical goals. These contexts are Form-and-Accuracy, Meaning-and-Fluency, Task-Oriented, and Procedural. He shows how any sequence of L2 classroom interaction displays three 'interactional properties' which derive from the overall institutional goal, which is that 'the teacher will teach the learners the L2' (p.183). These three properties are:

1. Language is both the vehicle and object of instruction.
2. There is a reflexive relationship between pedagogy and interaction, and interactants constantly display their analyses of the evolving relationship between pedagogy and interaction.
3. The linguistic forms and patterns of interaction which the learners produce in the L2 are potentially subject to evaluation by the teacher in some way.

(Seedhouse 2004: 183-84)

Also within this socially-situated and interactionist perspective is Walsh's (2006) work on the interactional organization of the L2 classroom. He identifies four classroom contexts, which he labels 'modes'. These are skills and systems mode, materials mode, managerial mode and classroom context mode. A distinctive feature of Walsh's work, and one that is relevant to this thesis, is that he not only identifies the interactional features of each mode, but engages teachers in reflection about how they use the L2 as a tool for learning within the different modes.

Overall, then, there has been a substantial shift within L2 studies towards a more socially-situated perspective on L2 use and learning in classrooms, and this shift can also be seen in some recent studies of CLIL and immersion classrooms. One of the first such studies is Pekarek Doehler and Ziegler (2007), in which they examined classroom interaction in an immersion science classroom in German-speaking Switzerland, in which 15-16 year old students were studying biology through English. In this study, the

authors critique two prevalent assumptions underlying the dichotomy between 'content' and 'language' in immersion classrooms. In the first assumption, language learning is reduced to the acquisition of linguistic forms, without taking into account the interactional competences required for any learning or language use to happen at all (Hall and Pekarek Doehler 2011; Macbeth 2011). The second assumption sees communication as the exchange of contents, with talk being *about* something, rather than constituting an activity in itself. The study focuses on how the participants themselves used talk-in-interaction to sequentially organize the activity of science and language. In doing so, the participants used the L2 not only to communicate about science content, but also enacted situated identities as learners or experts, or teacher and students, as they jointly co-ordinated classroom activity. The study shows how participants' orientations to language and to academic content are interrelated in very complex ways, which theoretical approaches that separate content and language are unable to account for. When participants oriented to L2 form, it was embedded in and contributed to activities around specific scientific concepts, with the interplay between language and science being inextricably intertwined with the sequential organization of classroom interaction as the class shifted from one activity to another. This interplay between L2 forms and science content also appeared when the teacher gave the students' contributions grammatical formatting, by, for example, insisting on the generic use of the definite article.

Another study which takes a socially-situated perspective on CLIL classroom interaction is that of Evnitskaya and Morton (2011). This study adopts the less 'purist' stance of combining the framework of communities of practice with multimodal conversation analysis to investigate interaction and the formation of identities in two Spanish CLIL secondary science classrooms. By using a multimodal conversation analysis methodology, the study identifies differences between the ways in which two CLIL classrooms in the same subject are constructed as communities of practice, and the different identities to which participants orient. In a first year science class, learners were positioned as observers and reporters of phenomena they had observed in the lab under a microscope. In contrast, in a fourth year class, learners were positioned as having the role of using scientific reifications to reinterpret phenomena they were familiar with from their everyday lives outside the classroom. Using multimodal micro-analysis, the authors show how a range of semiotic resources, including the three

language codes used in the classrooms (English, Spanish and Catalan) and resources in other modes such as gesture, were combined and used to construct these CLIL classroom communities of practice. The ways in which these resources were combined in these two classrooms constructed communities of practice in which learners participated and activated identities in markedly different ways. In the first year class, interaction and language use focused on observations of the behaviour of a cell under a microscope, and descriptions of its movements. In the fourth year class, the teacher built sequences of interaction around different metaphors of 'seeing', constructing learners as observers capable of perceiving a scientific reality beyond surface appearances.

In another recent CLIL study, Kupetz (2011) uses a strongly socio-interactionist and multimodal approach in a case study of a 10th grade German high school student's production of explanations when studying geography in English. The study provides a fine-grained description of how the student used a variety of multimodal resources such as body position and gesture, and a sketch, to build subject-relevant meanings, and how he used other multimodal resources to engage other participants in solving word-finding problems. The analysis shows how participants in CLIL classrooms use interactional competence to shift in and out of different classroom micro-contexts, for example, between those in which there is an orientation to L2 forms, and those in which the focus is on content-related meanings. As Pekarek Doehler and Ziegler (2007) point out, the use of language forms cannot be isolated from the situated activity of the classroom, but there may be occasions where participants' attention is shifted to an explicit focus on aspects of L2 form. However, in keeping with the emic perspective of a situated learning approach, Kupetz shows that shifts of attention to form are ultimately a participants' matter, in that it is 'only where it is made relevant by the participants themselves, (that) there is an occasional change to focus on form' (p. 134).

Studies such as these, which see language and learning as socially-situated practices, may be the best equipped to overcome some of the unhelpful binary distinctions which can obscure our thinking about what goes on in CLIL classrooms. As Pekarek Doehler and Ziegler's work suggests, it is not productive to essentialise or reify concepts such as 'content' and 'language' in CLIL/Immersion classrooms. In actual practice, they are so intertwined that it is impossible to disentangle them. Barwell (2005) also warns against seeing 'content' and 'language' in terms of a 'conduit' metaphor in which school

subjects like mathematics, science, history or geography are seen as 'a kind of substance, contained, presumably within the teacher or within some external 'body of knowledge' that exists 'outside' teachers and learners' and language is seen as 'a kind of portal through which curriculum content is accessed or transferred' (2005: 143-44). Barwell's work on the integration of content and language in bilingual mathematics education draws on a theoretical framework that is not too distant from the socially-situated and interactionist perspective seen in the studies reviewed above. That perspective is discursive psychology, a theoretical framework which draws on ethnomethodology, conversation analysis and sociology of science (Edwards and Potter 1992, Hepburn and Wiggins 2007). Discursive psychology sees 'psychological' phenomena such as knowledge, belief and conceptual change as social action, an intrinsic part of what people are doing when they use language and other semiotic means in interaction. Barwell shows how EAL learners, when doing a maths problem, are able to explore language forms and explore how language and mathematical structure are related. As he puts it,

> (…) various aspects of thinking and learning are all inter-woven, with attention to written form, to genre and to mathematical structure all mutually contextualising and situating each other. Thus, language and content can be seen as reflexively related, and as mediated by the social activity in which they are engaged.
>
> (Barwell 2005: 217)

A discursive psychological approach, then, places emphasis on the discursive practices through which participants realise activity, and does not resort to inner mental explanations of what they are doing or their motivations. 'Doing' content or language is thus seen as a matter for participants in interaction, and the analytic focus is on the detail of the actual practices through which language-in-interaction is used as a tool for classroom activity. In another CLIL study using a discursive psychological perspective, Morton (2012) shows how a teacher used a range of discursive practices to work on her students' 'misconceptions' about an area of genetics in a bilingual science class. The study shows how language, interaction, and content were interwoven as the cognitive construct of 'conceptual change' was respecified as an interactional matter as teacher and students used L2 talk-in-interaction to move towards the 'scientific version' of the

phenomena being studied.

Such studies using a socially situated and discursive-psychological perspective can establish links with the kind of sociocultural research in content classrooms reviewed above. For example, L2 talk-in-interaction as a tool for learning in CLIL classrooms can be seen as what Wells (2007: 160) describes as 'discoursing', that is, 'the use of language in interaction with others.' For Wells, discoursing 'always functions as a mediational means in achieving the goals of the action in which it occurs' (p.175). This implies that we cannot extricate instances of language use in CLIL classrooms from their role in achieving pedagogical goals, which are generally the learning of the knowledge, understanding and skills relevant to the subject being taught. As the studies from the socially-situated perspectives reviewed above suggest, essentialising and reifying dichotomies such as 'content' and 'language' and 'meaning' and 'form' may in fact be hindering our understanding of the ways in which CLIL classrooms may be productive environments for content learning and L2 development.

3.3 The L2 as a curriculum concern in CLIL

The second major perspective on the role of the L2 in CLIL is that of language as a curriculum concern. The term 'curriculum concern' is taken from Leung's (2001) work on how a particular conception of second/additional language learning is implicit in policy statements and practices relating to English as an additional language (EAL) in English schools. In this paper, Leung argues that, by 'mainstreaming' EAL learners into classrooms with mother tongue speakers, and by not identifying any explicit approach to language goals and pedagogy, the needs of EAL learners have become a 'diffused curriculum concern' rather than a 'distinct focus'. Leung's discussion of and use of Bernstein's work is of direct relevance to the notion of 'competence', to be discussed in section 3.4. Here, I take one aspect of his discussion, the lack of a distinct and explicit language pedagogy, narrowing his notion of 'curriculum concern' in this case to the issue of whether, and to what extent, specific aspects of L2 knowledge or skills are prespecified at the planning stage and/or acted on in classroom interaction. The discussion of 'curriculum concern' is thus deliberately narrowed, to be broadened out into the wider notion of competence in section 3.4.

The question of whether there should be any distinct focus on aspects of the L2 in content-based teaching, and if so, which elements of the L2 should be the focus, has long been debated in immersion and other content-based contexts. There exists a tension between the benefits of content-based learning as a context for 'natural' L2 acquisition, and the perceived need among some researchers to capitalise on these benefits to also include an explicit focus on L2 forms. Overall, a consensus has emerged that immersion and other content-based language teaching should involve a systematic integration of content and language objectives. Genesee (1994: 7) gives a clear statement of this position:

> Immersion teachers need instructional plans in which language objectives are systematically integrated with academic objectives (…) This, in turn, means that at the outset teachers must specify the language skills that are important for students to learn (…). Academic tasks and instructional strategies must be selected carefully so that teachers are compelled to model and demand these designated language skills. Careful selection of academic tasks is also important so that students are obliged to use and learn targeted aspects of the language. In the absence of such plans, teachers may provide language learners with inconsistent and possibly even random information about target language forms.

This statement resonates with concerns expressed by other researchers about a random or 'incidental' approach to form-meaning relationships in immersion classrooms (Swain 1988; Swain and Carroll 1987). However, early on some researchers did not see an 'incidental' focus on language as problematic (Genesee 1987, Snow 1987), and this view was consistent with the mainstream SLA position on the benefits of a 'Focus on Form' approach in which aspects of form-meaning relationships would be dealt with as they arose in meaning-focused communication (Long 1991). However, another line of research was critical of the ways in which teachers in immersion classrooms did not take up opportunities to focus learners' attention on aspects of language form in more systematic ways (Day and Shapson 1996; Lyster 1998; Swain 1988). Overall, Lyster (2007: 27) is critical of the fact that initial conceptualisations of immersion education

underestimated the importance of systematic attention to the target language. In his view, much incidental attention to L2 forms is

> too brief and likely too perfunctory to convey sufficient information about certain grammatical subsystems and thus, in this case, can be considered neither systematic nor apt to make the most of content-based instruction as a means for teaching language.

For most immersion researchers, then, there needs to be some form of specific and systematic attention to language. However, this does not mean islolated and decontextualised grammar instruction. What is advocated is that teachers use ways of 'manipulating' content teaching to make it better language teaching (Swain 1988) or by making their classrooms 'discourse rich' in Genesse's (1987) terms. Snow, Met and Genesee (1989) recommended that content-based teachers could identify language that was necessary for understanding subject matter ('content-obligatory') and language that could be opportunistically taught through content topics ('content-compatible').

The most comprehensive framework for the integration of content and language instruction is Lyster's (2007; Lyster and Mori 2006) proposal for a 'counterbalanced approach'. Lyster argues that, in immersion and content-based classrooms, in which the prevailing focus is on the expression of content-related meanings, learners will benefit from a form of instruction which pushes their attention towards features of the target language that they may not otherwise notice. Teachers can accomplish this either through a 'proactive' approach in which L2 forms are pre-selected for treatment, or a 'reactive' approach in which teachers provide corrective feedback on learners' production. In a counterbalanced approach, teachers would have two broad options that they could take in shaping the interaction in their classrooms (see figure 3.1).

In the 'content-based' option, L2 classroom interaction provides learners with comprehensible input related to subject-matter topics. They are provided with opportunites to produce the L2 through engaging in content-related tasks. Interactional scaffolding is used to negotiate subject-related concepts and meanings rather than L2

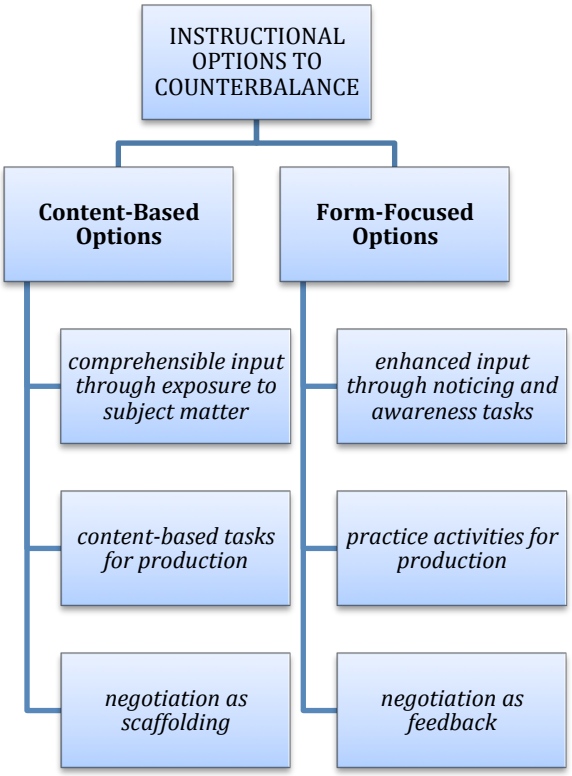

Figure 3.1 Lyster's 'counterbalanced' approach (Lyster 2007: 135)

forms. In the 'form-focused' option, noticing and awareness raising tasks are used to shift learners' attentions to aspects of L2 forms that otherwise may not be salient in meaning-focused interaction. They are given opportunities to produce these forms through controlled practice activities, and negotiation in classroom interaction takes the form of feedback on learners' L2 production, in the form of such strategies as prompts or recasts. Lyster points out that the two options should not be seen as isolated from each other, and that teachers need to work between both, shifting learners' attention one way or the other depending on the prevailing form or meaning focus in classroom interaction.

Lyster's proposals have a strong pedagogical orientation and are well founded in arguments from SLA and cognitive (particularly skill-acquistion) theory. The counterbalanced approach provides an overarching framework for incorporating a range of pedagogic practices into content instruction. However, it cannot in itself specify *which* elements of the L2 should be identified for a proactive focus, nor does it specify any particular framework for describing linguistic elements or identifying skills. In

terms of L2 as a curriculum concern, the proactive option raises important issues about syllabus design. If immersion and CLIL teachers are to systematically focus on L2 forms in noticing, awareness and practice activities, which structures and other items from an already overcrowded language syllabus (not to mention content) will be chosen for focus, and how much classroom time will be spent on them? It could be argued that 'content-obligatory' language should be chosen for focus, but such L2 items and structures may not be the kinds of 'recalcitrant' forms that need to be 'destabilised' in learners' interlanguage systems (taking a mainstream SLA view). Indeed, in Lyster's examples of form-focused work in immersion contexts, the linguistic items chosen are often staples from the language teaching syllabus, such as grammatical gender, pronouns, verb tenses and conditionals. In terms of classroom activity, proactive language focus means setting aside time for noticing, awareness and practice activities. Lyster provides some helpful examples of how such activities might be integrated with content-learning goals, but, in principle, the introduction of practice activities for the production of pre-selected L2 forms may sit uneasily with the pedagogy of any non-language subject. Indeed, even in language teaching, such activities often feel contrived and strained. In content teaching, they may lead to learners being unsure what the goals of classroom activity are. In spite of these caveats, Lyster's work remains a cogent and theoretically powerful framework for the integration of content and language instruction. It merits close examination and experimentation in CLIL contexts, so that the issues raised here can be teased out empirically.

Within CLIL itself, however, there is already a well-developed framework for the integration of content and language objectives. Coyle (Coyle 2007; Coyle, Hood and Marsh 2010) has developed a 'four Cs' framework for planning CLIL instruction, which includes a 'language triptych' for the identification of specific language objectives in planning CLIL units. At the broader level, the four 'Cs' refer to content, cognition, communication and culture. Within the 'C' of communication, the language triptych consists of three dimensions of language for CLIL: language of learning, language for learning, and language through learning (Coyle *et al*. 2010: 36). Language of learning, similarly to Snow *et al's* (1989) 'content-obligatory' language, is the language needed for the expression of content-related concepts and knowledge, often in the form of subject-specific terminology. Language for learning is that which learners need to use to participate in classroom activity, and includes such functions as asking

questions, giving opinions, explaining and defining. Language through learning refers to language that emerges during the learning process as learners engage in cognitively demanding activities and explore new areas of meaning, and is thus by definition unlikely to be predictable in advance.

The language triptych is a useful heuristic for thinking about language as a curriculum concern in CLIL, and for starting out on the practical task of identifying language objectives in teaching units. Coyle *et al*. (2010) link the triptych to their version of Cummins' four quadrants (Cummins 1984; 2000) in which activities are characterised in relation to the balance between cognitive and linguistic demands. They call this version of the quadrants the 'CLIL Matrix' (see figure 3.2).

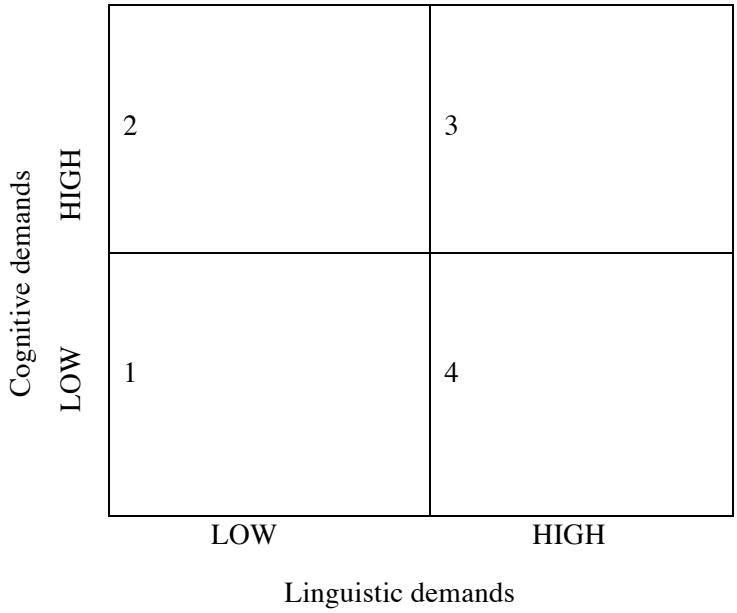

Figure 3.2 The CLIL Matrix (Coyle *et al*. 2010: 43)

The CLIL matrix can be used by teachers, when planning, to devise sequences of activities in which there is a balance and sequenced grading of cognitive and linguistic demands. Such planning, in theory, can lead to teaching units which follow trajectories in which learners are not overburdened by inappropriate cognitive and/or linguistic demands. As will be discussed in the next chapter, such planning for CLIL teaching, in which language is seen as a genuine, and not diffused, curriculum concern, involves a systematic approach, and a high degree of language awareness among CLIL teachers.

It is thus crucial that CLIL teachers have available to them appropriate tools for the identification of appropriate language objectives to integrate with content objectives at the planning stage. Frameworks such as that of Coyle *et al*. described above, while useful, are rather broad and general and do not provide a suitable linguistic framework for the identification of such objectives. For this, it is necessary to turn to a functional model of language which can provide rigorous descriptions of the lexis, grammar, and text-types through which content knowledge across disciplines is construed. For at least the last two decades, the model of language that has proved most effective in linking language objectives to content learning in the wider educational context is that of Hallidayan systemic functional linguistics (SFL). SFL sees language, not as an abstract formal system, but as a system of options in making the meanings relevant to social activities. It thus has direct relevance at both the theoretical and practical levels. In terms of educational theory, it contributes to our understanding of how meanings are produced and participants positioned in and through language. At the practical level of interest here, it provides tools for identifying the meanings made in educational texts and activities, and for describing the lexico-grammatical resources through which they are realised.

Notable early work in linking linguistic realisations to the knowledge demands of the curriculum was carried out by Mohan (1986). Mohan's framework of 'knowledge structures' builds a bridge between subject-matter content, cognitive operations such as describing, sequencing, classifying, identifying principles and assessing alternatives, and the lexico-grammar of language. It emphasizes the use of such non-linguistic modes as graphic organizers in helping teachers to present and learners to use the knowledge structures underlying content across all areas of the curriculum. With its emphasis on semantics as opposed to syntax and in the use of 'activity' as a unit of analysis, Mohan's early work was a precursor of the SFL and sociocultural work which was to follow ten years later.

In the last two decades, the most influential work in education from an SFL perspective is that of the 'Sydney School', in which researchers (e.g. Cope and Kalantzis 1993; Johns 2002; Martin 1999, 2009; Martin and Rose 2008) have been developing a pedagogy for increasing students' awareness and control of a range of genres important to their learning of school subjects such as history and science. Based on the SFL notion

of genre - broadly the text-types through which academic knowledge is construed - the main objective of this pedagogy is to make explicit the stages and linguistic features of key school genres and guide students in the production of these important text types. As Llinares, Morton and Whittaker (2012: 111) point out, 'Language is not simply a means of transport for ideas, carrying the knowledge of a subject, but, in fact, it constructs, structures and even restricts knowledge through discipline-specific texts'. Thus, CLIL learners need to know how the texts which construe the knowledge of the subjects they study are constructed, what their purposes are, and, importantly, the lexico-grammar (or registers) through which they are realised. In short, they need to be apprenticed into the 'language of schooling' (Schleppegrell 2004) in each of the subjects they study.

Genre-based research and pedagogy are a relatively new arrival in foreign language teaching (see Martin 2009), but there is a well established line of work that investigates the genres and registers of school subjects such as history (Coffin 2004, 2006), geography (Humphrey 1996; Wignell, Martin and Eggins 1993) and science (Veel 1997). On a more interventionist level, SFL researchers have worked successfully with subject teachers to raise their own and their students' awareness of the genres and registers of the subjects they teach/learn, for example in history (Coffin 2006; Schleppegrell and de Oliveira 2006). Within CLIL, genre pedagogy was advocated early on by Morgan (1999), and has recently been the focus of increased attention, particularly in the work of Morton (2010) and Llinares, Morton and Whittaker (2012), which offers a comprehensive description of school genres from a CLIL perspective.

One area in which a functional approach to language, in the shape of applying the notions of genre and register, has been prominent, is work on the language needs of ESL learners in mainstream classrooms in Australia. We saw in the previous section how Gibbons (e.g. 2006) has used a functional perspective to describe the mediation processes by which learners can be moved towards more functionally appropriate academic registers. In a similar line of research. Mohan and Beckett (2003) show how content teachers can functionally recast students' utterances to 'upgrade' them to a more appropriate academic register. Such practices, which from one angle can be seen in terms of the 'language as a tool for learning' domain, also rely on adequate descriptions of the functionally appropriate language required to construe subject-related meanings and build the relevant genres. In the context of ESL learners in mainstream classes in

Australia, Polias (2003) has identified functionally appropriate language for the purposes of teaching and assessment at all grades of compulsory schooling. Polias' model is based on the notions of 'scope' and 'scales', with the scope using the concepts of genre and register to identify language learning outcomes linked to subject-matter content, and the scales describing different achievement levels. Llinares, Morton and Whittaker (2012) show how Polias' framework can be used in identifying language outcomes and for assessment in CLIL.

Related to the genre perspective is the identification of 'academic language functions' in CLIL. These are functions such as defining, hypothesizing and explaining, which have strong links with thinking skills or cognitive functions. Dalton-Puffer (2007: 130) makes a distinction between larger academic functions which would require a rhetorical analysis, such as persuading and solving problems, and 'microgenres' which are smaller-scale and more amenable to syntactic analysis. She shows how, in CLIL classroom discourse, such academic language functions as defining, hypothesizing and explaining are present, but are rarely, if ever, the object of an explicit pedagogical focus. Here, then, is another example where language objectives could feasibly be integrated with content objectives. However, as Dalton-Puffer (2007: 171) points out, this can only happen if CLIL teachers are made aware of these functions, and can introduce tasks at the planning stage which would also raise their learners' awareness of these functions and their realisations.

In sum, it would appear that there is no shortage of perspectives that offer principled approaches to identifying language learning objectives in CLIL. Language need not be a 'diffused curriculum concern' as Leung argues that it is in much EAL teaching. However, the fact that useful linguistic descriptions are available for CLIL educators is not in itself sufficient to ensure that any of them will be taken up and integrated into the teaching of CLIL units. Irrespective of the merits of any of the approaches outlined here, they all require a high degree of language awareness on the part of CLIL teachers, and, not only that, the pedagogical content knowledge (PCK) that would allow them to be able to introduce these approaches at the planning stage and implement them in their classrooms. In this sense, the teacher language awareness (TLA) required of CLIL teachers goes well beyond that demanded of language teachers (see Andrews 2007).

For language teachers, after all, language is their subject, and they can be expected to have at least a well developed declarative knowledge of, for example, grammatical concepts. CLIL teachers, however, need to have a high degree of awareness of the relationships between the concepts and skills relevant to their subjects and the genres and registers through which they are construed. Identifying language objectives around content is a challenge even for language teachers, who are generally more used to structural syllabuses. Thus, one main conclusion arising from this review of how language can be seen as a curriculum concern in CLIL, is that it highlights the centrality of teachers' knowledge to the success or failure of the whole CLIL enterprise. There are many ways of seeing language as an object of learning in CLIL, and of integrating it with content. None of them will work if CLIL teachers do not have awareness of these perspectives, and the pedagogical content knowledge to put them into practice.

3.4 The L2 as a matter of learners' competence in CLIL

The third perspective on language relevant to CLIL teaching is one in which the L2 is seen as a matter of competence, more specifically, as learners' competence (although CLIL teachers' L2 competence may also be a focus). Of course, language as a matter of competence is inextricably linked with the other two perspectives - it is through participation in classroom interaction that L2 linguistic and interactional competence are expected to develop, and seeing language as a curriculum concern allows CLIL educators to identify the components, stages and sequences through which this L2 development may occur. That said, viewing the role of language in CLIL from the perspective of the competences CLIL learners have and are expected to develop brings together in a coherent fashion a whole range of concerns that have been dealt with in the literature, and as will be seen in this thesis, are pedagogical concerns of teachers in their practices.

A fundamental argument put forward by CLIL advocates is that learners studying content in an additional language can be expected to develop competences that are quantitatively and qualitatively different from those acquired through studying a language as a subject, as in traditional modern foreign language teaching. In other words, they will learn *more* of the additional language, and will develop *different* kinds of skills. In this sense, CLIL can be seen as a response to a perception of relatively poor

results from studying foreign languages simply as curriculum subjects, reflected in the view that 'the hours allocated for language teaching within the curriculum were often insufficient to produce satisfactory outcomes' (Coyle, Hood and Marsh 2010: 5). Thus, CLIL proponents have argued that using a foreign language such as English for the study of other curricular subjects creates a 'natural' environment for the development of a wider range of L2 knowledge and skills, as Coyle, Hood and Marsh put it, 'CLIL can offer learners of any age a natural situation for language development which builds on other forms of learning' (2010: 11).

As was seen in section 2.3 of the previous chapter, empirical results on which areas of L2 competence are likely to develop in CLIL are somewhat tentative. In SLA-oriented studies, competence is seen in terms of linguistic proficiency in areas such as vocabulary, morphosyntax and pronunciation, and the use of oral and literacy skills, as well as some affective aspects such as language attitudes and motivation. While SLA studies have produced interesting and suggestive findings about which areas of L2 competence CLIL learners are more or less likely to develop (especially in comparison with their non-CLIL counterparts), it is useful to take a step back and look at the models of competence which underwrite practitioner and researcher statements about what can be expected from CLIL learners. This will allow us to contextualize more fully the ways in which the L2 as a matter of learners' competence enters into the teachers' world of practice, including their actual classroom practices.

Statements about the levels of attainment in the L2 expected from CLIL learners do not generally stipulate 'nativelike competence' as a goal. Indeed, CLIL proponents tend to distinguish CLIL programmes from Canadian immersion in this respect. Baetens Beardsmore (2009: 209-10) points out that:

> Full immersion offers intensive contact with the target language and aims for native or near native competence at least in receptive skills of comprehension and reading [while] most CLIL-type programs offer less intensive contact with the target language [and] aim at achieving a functional competence in both receptive and productive skills (…)

This is a helpful distinction, and goes a long way to clearing up some of the confusion that may exist when researchers and practitioners seek to apply findings and prescriptions form Canadian immersion experiences to European CLIL. For example, in the 'counterbalanced approach' advocated by Lyster (2007), the point of reference appears to be the behaviour of native speakers, as in this statement by Lyster (2007: 16):

> Immersion students are second language speakers who are relatively fluent and effective communicators, but non-targetlike in terms of grammatical structure and non-idiomatic in their lexical choices and pragmatic expression - in comparison to native speakers of the same age.

However, it should be clear that the behaviour of 'native speakers of the same age' is an unrealistic goal in terms of L2 competence for learners in European CLIL programmes studying through a language (mostly English) which has no official role in their countries and is not used in their local communities.

More recently, notions of linguistic competence have been subject to a refreshing widening of perspective, in the form of a focus on plurilingual competences. In this perspective, a learner's linguistic abilities are seen in terms of the range of languages that he or she has some competence in, and it is recognised that having different levels of competence across and within languages, including one's 'native' language is a worthwhile lifelong learning goal. Such views receive theoretical support from psycholinguistic perspectives such as Cook's (1999) notion of 'multicompetence', or, more recently, in Blommaert's (2010) sociolinguistic concept of 'truncated repertoires'. And of course, this plurilingual perspective is at the heart of the Europass language passport linked to the Common European of Reference for languages. The notion of plurilingual competence has profound implications for CLIL, and indeed CLIL may be well equipped to contribute to this agenda, as pointed out by Coyle, Hood and Marsh (2010) as they look towards future developments. As they put it, 'Curriculum design which takes account of defined differentiated outcomes from within a broad skill set for a range of languages, including the first language, is a desirable way forwards (…) (2010: 157).

However, such enlightened views of the linguistic competences that may be expected as outcomes from CLIL instruction may not reflect a wider tendency among CLIL proponents and practitioners to use relatively simple and under-problematized notions of the types of competence that CLIL learners may develop. Dalton-Puffer (2009) argues that CLIL practice is in need of a 'reality check' in terms of what aspects of communicative competence can be expected to develop through participation in CLIL lessons. The CLIL classroom may indeed be a 'natural' environment for language use and learning, but it may not be in ways that some CLIL advocates believe. Using Canale and Swain's (1980) four-part model of communicative competence, Dalton-Puffer shows that, in most respects, CLIL classrooms are just like EFL or any other type of classroom, particularly in the relatively limited affordances they provide for the expression and development of a broad range of communicative functions. She points out (2009: 212) that CLIL learners have to build their communicative competence under a set of conditions inherent in the local classroom setting:

- A clear distribution of expert and novice roles
- A specific turn-taking and topic-nomination mechanism
- Idiosyncrasies in the realisation of repair and directives
- Limits on meaning negotiation and conversational challenge
- Quantitative and structural limits on student output
- Dominance of a small number of speech functions

Similar qualms about the nature of content learning lessons for L2 development were discussed in section 3.2 of this chapter, from the perspective of L2 discourse as a tool for L2 learning (e.g. Musumeci 1996; Pica 2002). Here, the CLIL classroom setting is seen from the perspective of its impact on the possibilities for CLIL learners to develop linguistic, sociolinguistic, discourse and strategic competences. Dalton-Puffer argues that 'the conditions of classroom talk necessarily impose restrictions on all aspects of communicative competence acquired and practiced in CLIL' (2009: 212). It is in this sense that she claims that there is a need for a 'reality check', which is accomplished by looking at empirical classroom data. Statements of language goals pursued by any CLIL programme, whether they involve a 'functional' or 'nativelike' L2 competence on the

part of the learners, will be meaningless unless they take into account the communicative possibilities of CLIL classrooms.

Another way of characterizing the types of learner competence that may be relevant to CLIL comes from Cummins' (1979) seminal distinction between two dimensions of language proficiency: basic interpersonal communication skills (BICS) and cognitive-academic language proficiency (CALP). As Cummins pointed out, immigrant second language learners of English often acquire peer-appropriate conversational fluency within around two years, but can take from 5-10 years to catch up with their peers in academic language skills. Although the BICS/CALP distinction has been critiqued over the years, particulary for not taking into account sociolinguistic factors (Troike 1984), Cummins has more recently (2008: 81) defended its utility as a way of drawing attention to 'specific ways in which educators' assumptions about the nature of language proficiency and the development of L2 proficiency have prejudiced the academic development of bilingual students.'

In European CLIL contexts, however, the concepts of BICS and CALP may work somewhat in the opposite direction from the way they operate in ESL contexts with immigrant learners. What may be at issue with many CLIL students, particulary in contexts where the L2 is hardly used, is the opportunity to develop basic conversational skills. CLIL learners whose only contact with the L2 is in the classroom may develop a limited communicative competence for coping with the needs of classroom interaction (see discussion of Dalton-Puffer's 'reality check' above). Indeed, they may develop a limited range of spoken and written academic language skills through participation in classroom practices, even without any explicit attention to the linguistic and discursive features of the genres they are using. This has been described in studies which, from a systemic functional perspective, describe how CLIL learners express the 'ideational metafunction' of language - that is, language used to construe meanings related to content-related concepts (Llinares and Morton 2010; Llinares and Whittaker 2007, 2009, 2010; Whittaker and Llinares 2009; Whittaker, Llinares and McCabe 2011). However, their competence may be more limited when it comes to basic conversational skills, for example the ability to talk about their own needs and experiences relating to the world outside the classroom. In the context under study in this thesis, this was arguably the case, with the Bilingual Education Project evaluation team identifying as a

problem the learners' lack of contact with English outside the classroom. If there is limited contact with the L2 outside the classroom, then it is all the more important to exploit the potential of the CLIL classroom for the expression of what in Hallidayan functional linguistics is described as the 'interpersonal metafunction' of language. For example, Llinares, Morton and Whittaker (2012), using data from CLIL classrooms in three European contexts, show how CLIL learners can be helped to develop competence in expressing these interpersonal meanings.

In any case, it may be unhelpful to make too rigid distinctions between basic conversational and academic language competences. The whole concept of 'academic' language can be questioned in the sense that many classroom learning tasks and activities require conversational skills similar to those used in informal situations outside the classroom. Bunch (2006) shows how ESL learners in mainstream classrooms use language differently when they discuss ideas in groups from when they prepare to present these ideas to their teacher and classmates. In discussing ideas in groups, learners used a 'language of ideas' and when they were preparing their actual answers, they used a more formal 'language of display'. Bunch argues convincingly that the notion of 'academic English' should be expanded beyond the 'academic' versus 'conversational' language distinction. When considering CLIL learners' L2 competences, this helps us to get beyond over-rigid BICS/CALPS distinctions (that Cummins himself would not defend - see Cummins 2008) to see that more 'conversational' language skills are very much a part of doing academic learning in CLIL classrooms. As will be seen in chapter six of this thesis, subject-related classroom interaction does require students to engage in more 'conversational' exchanges in which experiences outside the classroom become relevant.

In considering language as a matter of competence in CLIL practices, then, it is useful to avoid relying too much on rigid, essentialising views of 'competence', built around models of communicative competence such as Canale and Swain's or the BICS/CALP distinction. Indeed, the dominant constructs of communicative competence have been critiqued, for example by Leung (2005b), who has advocated a 'convivial' communicative competence which would involve revisiting the original ethnographic conception in the work of Dell Hymes (1972). He criticises dominant views of communicative competence for assuming that it involves the kinds of things native

speakers can do, with these being turned into targets for learners. A more genuinely ethnographic view of communicative competence would set out to describe competences participants actually display, and how they develop in actual settings. Coming from another perspective, that of conversation analysis, Lee (2006) argues that current views of communicative competence as an externally-set target obscure the actual competences which L2 learners/users already display as they participate in classroom activity. Similar arguments have been presented in an L1 context by Macbeth (2011), who shows the ways in which classroom participants display a more fundamental understanding, or competence, in participating in classroom interaction, without which there would be no 'understanding' in the conventional sense (of acquiring content knowledge and skills, including language).

Linked to the conversation analysis perspective, recent work has focused on the interactional competence that L2 users need to draw on to successfully participate in a range of activities, including formal classroom lessons. Hall and Pekarek-Doehler (2011: 2) characterise interactional competence (IC) as having the following components:

- Knowledge of social-context-specific communicative events or activity types, their typical goals and trajectories of actions by which the goals are realized and the conventional behaviors by which participant roles and role relationships are accomplished;
- The ability to deploy and to recognize context-specific patterns by which turns are taken, actions are organized and practices are ordered;
- The prosodic, linguistic, sequential and nonverbal resources conventionally used for producing and interpreting turns and actions, to construct them so that they are recognizable for others, and to repair problems in maintaining shared understanding of the interactional work we and our interlocutors are accomplishing together.

In adapting this construct to CLIL classrooms, we can see how teachers and learners need to jointly construct the lesson itself as a communicative event, and the distinct activity types of which it is made up, for example doing a chemistry experiment, making a toy in a technology workshop, or evaluating an historical source. More

broadly, they will need to recognise and participate in question-answer sessions, group discussions and class presentations. Each of these 'micro-contexts' will be built up out of context-specific turn-taking practices and will have their own specific ordering and organization. In successfully accomplishing CLIL lessons, teachers and learners will need to draw on a wide range of linguistic, prosodic, sequential and nonverbal resources, including lexis, grammar, gaze, gesture and intonation. Working in an L2 will place specific demands on how they establish joint understanding and repair it when it breaks down.

Such a view of L2 interactional competence considerably widens the perspective offered by existing notions of communicative competence. In a way, L2 interactional competence can be seen as a 'hidden' competence that has not found its way into more mainstream descriptions of communicative competence or language proficiency. And yet, it is a competence that is fundamental to the very accomplishment of the CLIL lesson as an event. As such, it goes beyond a purely 'proficiency' approach to what it means to be competent in an L2, towards what Kramsch was already describing in 1986 as a 'discourse aptitude' and 'interactional competence'. It is also fundamentally a shared and situated competence. As Young (2008) points out, it does not reside exclusively in individuals but is displayed in how people interact together to jointly produce the activities they are involved in. It can thus be argued that any view of what competences CLIL learners display in participating in subject lessons, and how these competences can be expected to develop, needs to include L2 interactional competence as a fundamental category. This also goes for the CLIL teacher, who is responsible for deploying his or her L2 interactional competence to ensure that there is a productive alignment between his/her pedagogic goals and the unfolding organization of classroom interaction.

Moving beyond notions of competence as a linguistic or interactional matter, there is a more fundamental issue for CLIL with regard to the whole notion of 'competence' itself. This relates to the concept of 'competence' in the wider educational field, not just notions of communicative competence. Leung (2001) shows how differences between EAL learners and mainstream learners in UK content classes are 'flattened out' by the unspoken use of a 'competence' pedagogy in relation to language learning. Using Bernstein's (1996) distinction between 'competence' and 'performance' pedagogy, he

shows how policy statements and practices share assumptions belonging to broad ideological positions about the nature of learners and learning. Bernstein related the notion of 'competence' to progressive educational philosophies prevalent in the western world in the 1960s and 70s. He characterised competence as something which is by its nature creative, and acquired tacitly without the need for explicit instruction. It is a practical accomplishment of learners, achieved through social processes of negotiation, in which all are equally able to participtate, regardless of power differentials between them (see Bernstein 1996: 55). Leung takes Bernstein's conceptualisation of competence and uses it to articulate five key assumptions about EAL learning underpinning policy and practices:

1. There is no explicit recognition of individual differences among learners in their capacities or abilites in the L2;
2. All learners are expected to learn the L2 in more or less the same way;
3. There is no explicit or formal instruction of the L2;
4. There is no recognition of power relations of participants in terms of class, ethnicity, age or institutional roles;
5. There are no explicit statements of learners' starting points, stages they go through and expected outcomes as far as the L2 is concerned.

(Leung 2001: 44)

Thus, for EAL learners in mainstream subject classes, language learning is supposed to take care of itself as learners will simply 'pick up' the L2 by participating in classroom activities. The L2, in Leung's term, becomes a 'diffused curriculum concern' which 'has been integrated into the rest of the curriculum to the extent of being almost invisible' (2001: 45). Such a 'competence' ideology can be seen in some statements about how learners' competences are expected to develop in immersion settings, such as this from Genesee (1994: 2):

> From a pedagogical point of view, the integration of language and academic instruction in immersion programs means that mastery of academic skills and information provides a natural basis for second language teaching and learning. Language serves as a vehicle for discussions of academic matters and is only a secondary focus of instructional attention. Indeed, language learning in

immersion is secondary to academic achievement.

Such views of the development of L2 competence through participation in content classrooms present what could be described in Bernsteinian terms as a weakly classified and framed pedagogy as regards language, while it is likely that the subject curriculum will be more strongly classified and framed. In other words, what is to be learned, and how, will be explicitly stated for the content, while the language competence will be left to 'grow' naturally. As has been discussed mainly in section 3.3 of this chapter, there are a range of viable alternatives to this 'competence' view of L2 development in CLIL. However, it is an empirical question to be explored in this thesis, the extent to which the teachers orient to their learners' L2 competence as something which is naturally acquired through participation in content classes, or which needs to be staged and sequenced through the identification of concrete language learning goals. In this thesis, the interest lies in the ways in which the teachers 'construct' their learners in terms of their developing L2 competence. This relates to their orientations towards differences in learner competence (between individuals, groups, grade levels), relationships between learner L2 competence and proposed activities and content topics, actions taken by teachers to scaffold learners' participation which take into account their L2 competence, and teachers' reactive strategies to learners' displays of (in)competence.

3.5 Chapter summary and conclusion

This chapter has laid the foundations for the rest of this thesis by presenting, in the form of a critical literature review, a triperspectival conceptualization of the roles of language in CLIL teaching. Language can be seen from one perspective as a tool for the communication and construction of content knowledge and skills, including language knowledge and skills. Here the sociocultural constructs of dialogue and mediation are key. Teachers use language-in-interaction as a tool to meet their pedagogical goals, and, as these goals shift, so too does the organization of the interaction. In the second perspective, language can be seen as an explicit curriculum concern, with specific language goals, preferably linked to content knowledge and skills, identified. While a range of frameworks which provide descriptions of language learning objectives is available, it was argued that the most suited to providing a framework for the integration of language and content was systemic functional linguistics (SFL),

particularly the constructs of genre and register. The third perspective on language discussed in the chapter was that of the L2 as a matter of learners' competence. While it is closely linked to the other two, it was shown that it is a distinct orientation to the role of the L2 in CLIL, as was seen in the debates around the various notions of competence in the literature.

Having laid the theoretical foundations for the rest of the study by providing an overview of how language has been conceptualized in the CLIL and related literature, it is now time to look at these three perspectives through another lens, that of CLIL teachers' cognitions and practices. An assumption underlying all that has been said in this chapter is that, whatever the conception of language that is available, it will be 'inert' knowledge in Whitehead's (1929) term if it is not part of what CLIL teachers know, believe and do. Thus, the three perspectives described in this chapter need to be seen from another vantage point, that is, the knowledge that CLIL teachers draw on and display in their planning and teaching. The next chapter, then, turns attention to what CLIL teachers think, believe, and know, and its relationship to their classroom practices, specifically in relation to the three perspectives on language in CLIL teaching as introduced in this chapter.

Chapter 4. CLIL teachers' language-related knowledge, thinking and practices

4.1 Introduction

Chapter three reviewed the literature on the roles of language in CLIL and other related approaches by introducing a triperspectival conceptualization of language as a phenomenon in CLIL teaching. There, it was pointed out that any conceptualization of language in CLIL, in order to have an impact on how CLIL is implemented in any context, needs to form part of the resources and repertoires CLIL teachers draw on in planning and teaching. This chapter thus shifts the focus of the thesis to the CLIL teacher, and what they think, know and believe about the role of language in teaching their CLIL subjects and how these cognitions relate to classroom practices. The chapter begins with a review of relevant literature on the characteristics and needs of teachers who teach content through additional languages. This literature is used as a background in the description of some relevant characteristics of teachers in the bilingual project which is the setting for the study. It is argued that the literature on teacher cognition and practices in CLIL and related approaches lacks coherence and consistency in terms of theoretical frameworks and concepts, and a sense of belonging to any research programme. In order to fill this gap, the chapter introduces the notion of teacher cognition, placing the thesis within this tradition of research on teaching by using Borg's (2006) framework. The chapter then turns to the core issue of this thesis: the nature of the language awareness required of CLIL teachers in order to teach effectively. Within the framework of teacher cognition, the construct of teacher knowledge is reviewed, particularly in contrast with the notion of belief. Different types of teacher knowledge are described, with an emphasis on the concept of practical knowledge. A framework for exploring the different dimensions of teacher knowledge is introduced, and this is proposed as an instrument for describing CLIL teachers' knowledge in relation to the triperspectival conceptualization of language in CLIL introduced in chapter three. The notion of teacher language awareness for CLIL (TLA-CLIL) is introduced, and this is related to the construct of pedagogical content knowledge (PCK). An instrument for eliciting aspects of CLIL teachers' PCK

(including TLA-CLIL), based on Loughran *et al*.'s (2004) Content Representation (CoRe) is introduced. The final main section of the chapter describes the thesis' overall theoretical orientation to knowledge as based on a social practice and constructionist approach, and previews some of the theoretical and methodological consequences of such a stance, issues which are taken up in detail in the following chapter, which describes the study's methodological approach and design.

4.2 Characteristics of the CLIL teacher

4.2.1 Research on teacher education and teacher cognition in CLIL and related approaches

Before going on to consider the theoretical and practical implications of what knowledge about language or language awareness is required of CLIL teachers, it will be useful to contextualize this by reviewing the literature on wider issues relating to initial and in-service teacher education in CLIL, and studies of what practising teachers who teach content in second languages think, know and do. Teacher education, or the lack of it, has been a recurring problematic issue in the CLIL literature, as can be seen in the concerns expressed in the 2006 Eurydice survey:

> Many countries draw attention to a big shortage of teachers with the qualifications needed to teach in schools making use of CLIL methodology. Teachers themselves complain that there are virtually no initial and in-service training programmes devoted to methods used specifically to teach a subject in other than the normal language of instruction.
>
> (Eurydyce 2006: 52)

However, more recently, steps have been taken to remedy this situation in CLIL, with programmes emerging in countries such as Spain (Lasagabaster and Ruiz de Zarobe 2010) and the development of frameworks or models for CLIL teacher education (Dafouz, Llinares and Morton 2010; Frigols Martín 2011). Lasagabaster and Ruiz de Zarobe's (2010) edited volume on CLIL in Spain contains six chapters on teacher education programmes. These papers describe the types of practices and programmes being implemented for teachers at primary, secondary and tertiary levels, and point to a

rich variety of researcher and practitioner-led teacher education initiatives. Escobar's chapter on CLIL teacher education in Catalonia highlights the notion of collaboration at various levels: between institutions (two universities and schools), between teachers with different profiles and specialisms, and between novice and expert teachers. Halbach describes a research-led Masters programme for primary bilingual teachers at the university of Alcalá in Madrid, in which research on bilingual classrooms in the Madrid area fed back into the Masters' programme they developed. Alejo and Piquer use a needs analysis framework to identify the needs of teachers in bilingual education programmes in Extremadura, and Ball and Lindsay describe how a set of teaching materials developed in the Basque country was used as a tool in teacher training for CLIL teachers.

One study of CLIL teacher education is of special interest as it is one of the few studies to actually examine the processes of initial teacher education for bilingual education as it takes place. Moore and Dooly (2010) analyse the interaction among trainee CLIL teachers in teacher education sessions at a university in Catalonia. They show how the participants used their plurilingual resources to engage in metalinguistic reflection, problematize and negotiate nonlinguistic knowledge, and negotiate identities as members of the community of practice of bilingual primary teachers. This study can be seen as belonging to a turn in CLIL research towards a more socially-situated approach in which theoretical models such communities of practice or conversation analysis are used, as in the studies by Pekarek Doehler and Ziegler (2007) and by Evnitskaya and Morton (2010) reviewed above.

Turning to studies which look at more experienced CLIL teachers' cognitions and practices, there are two studies in Dalton-Puffer and Smit's (2007) edited volume. Gierlinger's study set out to investigate CLIL teachers' perceptions of the strengths and weaknesses of the CLIL approach. The teachers on the whole found CLIL to be a positive professional experience, but they were less happy with what they perceived as a lack of support and guidance, for example, in developing materials, using CLIL teaching strategies or improving their own language competence. Similarly, in another study of practising Austrian CLIL teachers, Ziegelwagner found that they also complained about a lack of materials, and also about the increased workload involved in CLIL teaching. This concern with a lack of materials and teacher workload was also

found in a study of European CLIL teachers' attitudes to materials by Morton (forthcoming).

In another study from the Austrian context, Hönig (2010) used classroom video observation and interviews to investigate CLIL teachers' beliefs and practices in the area of assessment. Interestingly, this study touches on the issue of CLIL teachers' language awareness, namely awareness of the role of language in assessment practices. As is often the case in teacher cognition studies, she found discrepancies between what the teachers claimed to believe and their actual classroom practices. As she puts it,

> The teachers' absolute belief and assertion that they pay no attention to the language in assessment, however, was considerably shaken, indeed turned upside down, at my very first encounter with assessment in CLIL (2010: 67).

In common with other teachers from the Austrian context in the two studies reviewed above, the teachers in Hönig's study complained of a lack of support, particularly a lack of pre- or in-service training in CLIL methodology.

As well as descriptions of teacher education programmes and practices, and the few studies on in-service CLIL teachers' cognition and practice, there has been growing attention at a more theoretical level to the knowledge, or competences, needed by CLIL teachers for effective practice. This can be seen in the recent development of two frameworks for CLIL teacher education. Dafouz, Llinares and Morton (2010) outline a framework for CLIL teacher education which includes eight areas of competence for CLIL teachers: planning, learner needs, multimodality, subject literacies, context and culture, cooperation and reflection, interaction and evaluation. Along with detailed descriptors for each area of competence, the framework places emphasis on scaffolding, both in teachers' practices and in the development of teachers' competences. In line with this perspective on teacher learning, the framework includes a description of a portfolio for use in CLIL teacher education programmes.

Marsh, Mehisto, Wolff, and Frigols Martín (2010) have also developed a set of eight target competences for CLIL teachers. These are: personal reflection; understanding of CLIL fundamentals; content and language awareness; methodology and assessment;

research and evaluation; learning resources and environments; classroom management; CLIL management. They also provide detailed descriptors for each area of competence, and a set of four modules for organizing CLIL teacher education programmes. While there is some overlap in these two sets of competences (e.g. the areas of reflection and assessment/evaluation), there are considerable differences of emphasis. For example, the first set of competences emerged from a project which emphasised the sociocultural notion of scaffolding, and thus identified interactional competence as an important area of CLIL teachers' knowledge. In any case, these two sets of competences are a hopeful sign that the effort is under way to remedy one of the greatest challenges faced in European CLIL practice – that of a principled approach to CLIL teacher education.

Apart from the relatively few studies on European CLIL teachers' cognition and practices, insight about the needs of practising CLIL teachers can be drawn from studies of teachers in immersion contexts. In the context of French immersion teaching in Canada, Day and Shapson highlight the complexity of the immersion teacher's task:

> (…) in addition to combining subject-matter and language teaching through planned integration, immersion teachers must make on-the-spot decisions as to when, where and how to move in the continuum of language and subject-matter teaching in response to the particularities of their classroom situation.
>
> (Day and Shapson 1996: 137)

These researchers were able to portray the complex picture of the knowledge, beliefs and practices of teachers who integrate content and language in the case studies they carried out with immersion teachers in Canada. Such studies paint a complex and fascinating picture of how teachers can differ in their approaches to integrating content and language learning objectives. For example, a feature of one teacher's classroom practices was the use of paraphrasing in which she seemed to be providing a more correct model of language for students. However, when asked about this in interview she described it as a strategy not for correcting language, but as a way of providing 'a mirror they could use in checking their thoughts (i.e. to allow the child to negotiate meaning with him/herself).' (Day and Shapson 1996: 50).

In a European minority language context, Mac Corraidh (2005) investigated the beliefs and practices of primary teachers who taught curricular content through Irish as an immersion language. Among the main challenges identified by the teachers were the flexibility needed for unplanned and spontaneous use of the L2 (Irish), and the increased effort and workload involved in ensuring that the pupils' academic achievements were on a par with those of their monolingual counterparts. To ensure achievement of these goals, the immersion teachers had to intervene more intensely than teachers outside the immersion programme. In spite of the fact that the immersion teachers, as the only source of Irish available in the classroom, had great responsibility for the pupils' language development, he found that there was no consistent planning of tasks and activities to develop the pupils' Irish language skills. It is striking in this respect to note similarities between these findings and the findings of the BEP evaluation in Spain in which a lack of contact with the L2 (English) was identified as a concern. In both contexts, the teachers have prime responsibility for students' language development as one of the few sources of the L2, and this in spite of the vast differences in number of speakers and sociolinguistic status between Irish and English.

4.2.2 Characteristics of teachers in the Bilingual Education Project (BEP)

The BEP, the programme-level context in which the teachers in this study were working, is notable for the importance it gives to what the project's teachers know and are able to do. For example, in interview, the Project manager was clear about what kind of teacher characteristics were needed:

> What you don't need is a textbook. What you don't need is a series of textbooks. What you need are turned-on teachers who are looking at their own kids and can develop resources according to what is needed.

This quotes sets the tone for the high expectations which were required of the teachers in the Project. In fact, the teachers in the Bilingual Project share a number of the characteristics of what many would consider to be the 'ideal' CLIL teacher. They are specialists in their respective subjects, and, indeed, some have a double specialism, in both a non-language subject and language teaching. As for their English proficiency, the Project evaluation described the secondary teachers whose native language was Spanish

as being 'generally fluent and accurate when presenting topics and rarely [having] strong accents when speaking English' (Dobson *et al.* 2010: 53). This was certainly the case with the four teachers who participated in this study, who all used English flexibly and fluently for a wide range of pedagogic purposes, as will be seen in chapters 6-8. Another of the strengths of the Project was the fact that there were clear and comprehensive curricular guidelines for the subjects taught. These guidelines not only identified the content objectives from the integrated British-Spanish curriculum, but also identified specific language objectives and ways of integrating language and content.

The Project evaluation (Dobson, Pérez Murillo and Johnstone 2010) identified a wide range of effective practices used by the teachers, at both primary and secondary level. For example, at lower secondary level these practices involved the use of language for general subject-oriented teaching purposes and included such strategies as:

- Adapting material to suit different students' needs
- Getting students to ask probing questions about peers' presentations
- Guiding students towards underlying principles
- Prompting students to draw on their own knowledge
- Encouraging students to work out things for themselves
- Constantly checking for understanding
- Asking challenging questions to guide thinking

In terms of focusing on language explicitly, the following strategies were observed at lower secondary level:

- Focusing students on spelling distinctions (e.g. flour/flower)
- Expecting high standards of pronunciation and spelling
- Emphasising proper procedures for setting out data
- Helping students express particular relationships (e.g. 'The more … the more'; 'The less … the less')
- Eliciting precise use of language

(Dobson, Pérez Murillo and Johnstone 2010: 55)

According to the authors, these strategies appeared to have their origin in the teachers' professional experience accumulated over a number of years. Interestingly, they do not attribute these strategies to pre- or in-service training, which, although it was mentioned as a strength in the Project evaluation, was limited to one or two short in-service courses or sessions for most teachers. In addition to listing the strategies used by the teachers, the authors also identified other issues which might affect how they use their teaching knowledge in the classroom. These included how well teachers knew their particular students or classes, how they interpreted particular classroom situations, and factors influencing which strategy a teacher chooses to use at a particular time, the length of time it is used and for which pedagogical purposes. Such observations point towards a key issue in this thesis, that is, the relationship between more formal and theoretical knowledge about language, and the contextual constraints which impinge on how knowledge is used in teachers' actual practices, as manifested in classroom interaction and in their constructions of practice in verbal commentaries. This brings us to the topic of teacher cognition, a research framework which allows for the investigation of the relationships between what teachers think and know, and what they do.

4.3 Teacher cognition and CLIL

4.3.1 Borg's framework for research on teacher cognition in language education

As we have seen so far in this chapter, research on CLIL teachers' knowledge, beliefs and practices is beginning to emerge. However, it does not generally position itself within the wider field of teacher cognition research, whether within the more general field of education across content subjects (e.g. maths and science teachers' beliefs), or, more specifically, within language teacher cognition research (Borg 2006; Woods 1996; Woods and Çakir 2011). This means that there is little sense that research on CLIL teachers' knowledge, beliefs and practices belongs to any coherent programme, with sharing of tools, concepts and research goals. One such coherent framework with enormous potential to contribute to understanding CLIL practices is the one developed for language teacher cognition research by Borg (2006). Borg defines language teacher cognition as 'the complex, practically-oriented, personalized, and context-sensitive

networks of knowledge, thoughts and beliefs that language teachers draw on in ther work (2006: 272). Teacher cognition research, then, investigates 'what language teachers, at any stage of their careers, and in any language education context, think, know or believe in relation to any aspect of their work' (ibid.). It is important to highlight here that this research looks at 'any language education context', and it should be clear from the arguments presented in this thesis so far that the Bilingual Education Programme is clearly a language education context, notwithstanding the importance given to curriculum content learning outcomes. Borg also argues, and this is crucial to this thesis, that the study of teacher cognition should also entail 'the study of actual classroom practices and of the relationships between cognitions and these practices' (p. 273). Thus, this study examines not only the teachers' representations of practice in verbal commentaries such as interviews, but also uses video recordings and transcripts to explore the relationships between the teachers' actual practices and their understandings of these practices.

Borg argues that, although the study of teacher cognition is a thriving research field, one problem is that it draws on a vast range of conceptual and theoretical paradigms and has developed a plethora of different terms to describe its objects of study. For example, the broad phenomenon under study in this thesis, teachers' knowledge, has been variously labelled formal knowledge, propositional knowledge, practical knowledge, personal practical knowledge, pedagogical content knowledge, to name a few. However, Woods and Çakir (2011) make the valid point that the problem may not be so much the terminology, but the fact that the terms may refer to different concepts among researchers in teacher cognition. In response to these problems, Borg (2006) proposes a framework (see figure 4.1) for researching language teacher cognition (and, by extension, teacher cognition in any subject) which can bring some order to the field and work against this profusion of terminology and concepts.

He gives three reasons why such a framework is necessary:

- it militates against the accumulation of isolated studies conducted without sufficient awareness of how these relate to existing work;

- it reminds researchers of key dimensions in the study of language teacher cognition;
- and it highlights key themes, gaps and conceptual relationships and promotes more focused attention to these.

(Borg 2006: 284 – bullets added)

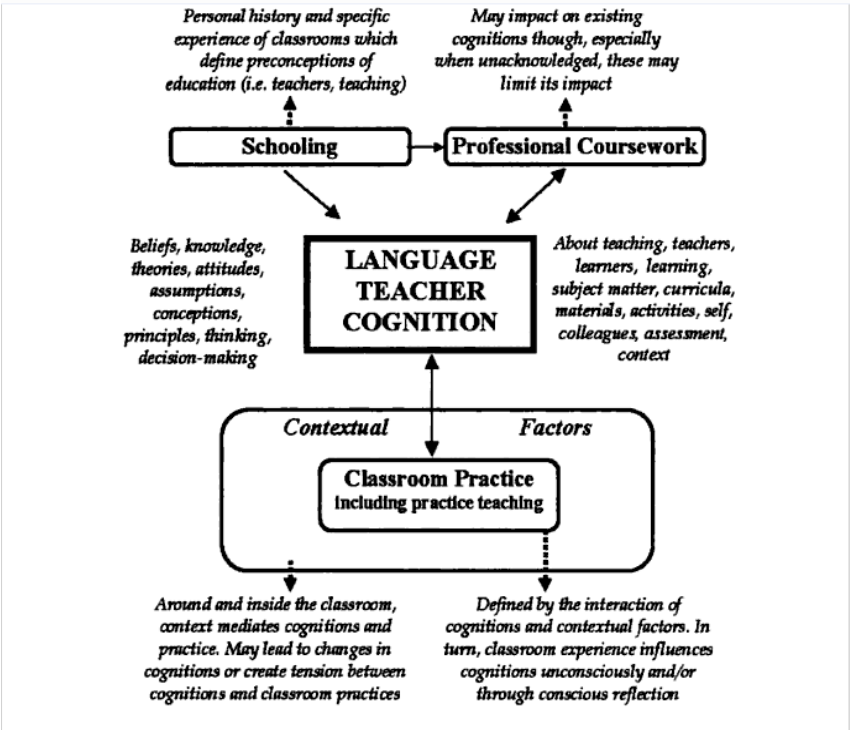

Figure 4.1. Borg's (2006) framework for language teacher cognition research

Each of these three reasons is of crucial importance in this study. First, as was seen in section 4.2, the study builds on the existing (if scarce) work on teacher cognition in CLIL/immersion contexts, and other contexts in which teachers teach subject matter in a language that is not the learners' (or perhaps their own) first language. Second, the study focuses on one of the key dimensions in Borg's framework, that of the interaction of contextual factors and teachers' cognitions in classroom practice, namely the relationships between classroom practice and teachers' understandings of practice. Third, it highlights key themes, gaps and conceptual relationships by focusing on one aspect of teacher knowledge, teacher language awareness (TLA) and filling a gap by

showing how this construct can be adapted and used in a context, CLIL, where it has not been much considered until now. As Borg points out, it is important for individual researchers to identify and define the terms and psychological constructs they draw on. If not, it is all too likely that 'similar labels will continue to be used with different meanings, and different terms will be used to refer to the same constructs' (2006: 272). It is for this reason that the rest of this chapter identifies and defines the central constructs used, such as 'teachers' knowledge', 'practical knowledge', 'pedagogical content knowledge' (PCK) and 'teacher language awareness' (TLA). This is important because these constructs are hierarchically ordered. The superordinate construct is teachers' knowledge, of which practical knowledge is one type (in contrast with formal or propositional knowledge). One aspect of practical knowledge is pedagogical content knowledge, the amalgam of subject specific knowledge and teaching strategies that allows teachers to do their work. Teacher language awareness, in turn, is seen as an aspect of pedagogical content knowledge. Thus, the examination of the relevant constructs in the literature necessarily begins with the superordinate category of teachers' knowledge.

4.3.2 Different perspectives on teachers' knowledge in teacher cognition research

Applying the framework for teacher cognition research allows a problematization of what 'knowledge' is in the context of CLIL teaching. For example, the different theories about language included in the triperspectival conceptualization in chapter two all belong to a certain realm of knowledge, the realm of shared, public, 'impersonal' knowledge. Seeing knowledge in this way is very different from Borg's description of the 'complex, practically-oriented, personalized, and context-sensitive networks of knowledge' teachers draw on in their work. We need a conceptualization of teachers' knowledge that is better equipped to allow descriptions of the knowledge CLIL teachers actually *use* as part of their practices. Otherwise, we run the risk of simply producing 'wishlists' of things we think all CLIL teachers ought to know and be able to do. As we have seen in the various frameworks discussed in this chapter, there is no shortage in the teacher education literature of prescriptions of the kinds of formal knowledge language and other teachers *ought to* have (see Morton, McGuire and Baynham 2006

for a review). As Morton, McGuire and Baynham point out, views of teachers' knowledge in language teacher education have tended to stick to a model in which formal, propositional knowledge in the form of theories of language or language learning are expected to be transferred directly to teachers, who can then implement them in their practices. In order to avoid falling into this trap in CLIL research and practice, we need much richer models of the nature of the knowledge involved in CLIL teaching, and for this we need to turn to the ways in which teacher knowledge has been characterized in teacher cognition research in the wider educational field.

What teachers know, how they come to know it, and how they deploy this knowledge, has been a central issue in teacher cognition research since the 1970s. Indeed, long before that, Dewey complained that the educational aims of his time were creating a situation in that the only knowledge expected of teachers was that of subject matter, and 'only in portions definitely prescribed and laid out, and hence mastered with comparative ease' (Dewey 1910: 54). Dewey, in advocating the need for teachers' knowledge to go beyond the precepts of the subject knowledge to include understanding of how children think and learn, and to pay attention to the moral dimensions of teaching, prefigured issues that were to be raised again in teacher cognition research towards the end of the 20th century.

In the forty years or so since teacher cognition's beginnings as a distinct field of research, two issues have received considerable attention in the literature on teachers' knowledge: the first is how teachers' knowledge can be disentangled from related concepts such as belief and attitudes, and the second is the distinction between formal, propositional knowledge and the practical knowledge generated by teachers, with questions about the epistemological authority of the latter. To take the first issue, for many teacher cognition researchers, 'knowledge' has been used as a kind of catch-all term for a wide range of aspects of teacher cognition. This is an influential position and is currently held by highly-regarded researchers in the field. For example, Verloop, van Driel and Meijer see teacher knowledge as an inclusive term that covers the different types of cognitions teachers might have:

> It is important to realize that in the label 'teacher knowledge', the concept 'knowledge' is used as an overarching, inclusive concept, summarizing a large

> variety of cognitions, from conscious and well-balanced opinions to unconscious and unreflected intuitions. (...) In investigating teacher knowledge, the main focus of attention is on the complex totality of cognitions, the ways this develops, and the way this interacts with teacher behavior in the classroom.
>
> (Verloop, van Driel and Meijer 2001: 446)

As Borg (2006) points out, this conceptualization of knowledge may be useful for some practical purposes in carrying out research on teacher cognition, but will not meet the test of those of a more philosophical disposition. They will see the need to distinguish 'knowledge' as a catch-all label for different cognitions from 'knowledge' as having epistemological worth, as contributing to a rational basis for action (Fenstermacher 1994). Related to this is the need to disentangle knowledge from other, more evaluative, cognitions such as beliefs or attitudes. This was Pajares' (1992) aim in clearing up the 'messy' concept of teachers' beliefs. He points out that 'Knowledge and beliefs are inextricably intertwined, but the potent affective, evaluative, and episodic nature of beliefs makes them a filter through which new phenomena are interpreted' (p. 325). However, he goes on to argue that beliefs can be usefully disentangled from knowledge for the purposes of research, and indeed, it is imperative to do so, as beliefs have a powerful impact on what teachers learn and do. Perhaps the important idea to bear in mind, and this will become more relevant later in the study, is not so much whether we can untangle knowledge and other cognitions such as belief philosophically, but whether we can understand how cognitions are held and used by teachers. It may be, as Verloop, van Driel and Meijer suggest, that 'in the mind of the teacher, components of knowledge, beliefs, conceptions, and intuitions are inextricably intertwined' (2001: 446). This is reminiscent of the approach taken in language teacher cognition research by Woods (1996). Rather than seeing knowledge and beliefs as static, separable entities, he sees them as forming a continuum, with teachers drawing on knowledge and belief structures indistinguishably in carrying out planning and teaching. He coins the acronym BAK (Beliefs, Assumptions, Knowledge) to refer to this bundle of resources teachers rely on in their decision-making and interpretative processes.

In terms of the consequences for practice and research in teaching, perhaps the most important distinction in the teacher knowledge research is that between more formal or propositional kinds of knowledge, often assumed to have been acquired in professional

coursework, and the more 'practical' kinds of knowledge, gained through experience (Fenstermacher 1994; Munby, Russell and Martin 2001). As Munby, Russell and Martin put it:

> There is a tension in the teaching profession between teachers' development, understanding and use of practical knowledge, and the generally acceptable understanding that knowledge is propositional. For example, teachers know that there is much more to their knowledge than knowing the subject matter to be taught.
>
> (Munby *et al*. 2001: 900).

This tension can be seen within teacher education research in the shift away from a 'training model' (Wideen, Mayer-Smith and Moon 1998) in which propositional knowledge learned in course work is applied in the practicum or in early teaching experiences. As an alternative to this, there has been a concerted effort to capture the nature of the kinds of knowledge that teachers gain in and through practice. Various conceptions of teachers' knowledge have emerged in this research: practical knowledge (Elbaz 1981); personal practical knowledge (Connelly and Clandinin 1985); pedagogical content knowledge (Shulman 1987); reflective practice (Schön 1983; 1987).

As the notion of practical knowledge developed by Elbaz (1981, 1983) has had a lasting influence on teacher cognition research, and is relevant to the approach to CLIL teachers' cognition adopted in this thesis, it is worth spending some time on it here. Elbaz's seminal work (1981, 1983) was crucial for teacher cognition research at the time as it portrayed the richness and complexity of the knowledge teachers held and used in teaching. Elbaz conceptualized teachers' practical knowledge as having three dimensions: content, orientation, and structure and generalizability. Content refers to the areas or aspects of teaching which teachers can have knowledge about. These are subject matter, curriculum, instructional procedures, the educational milieu and the self. For Elbaz, the content areas in themselves are not the key to understanding teachers' practical knowledge; it is more important to understand the way in which this knowledge is held and used, what she described as 'orientations'. She identified five orientations: situational, theoretical, personal, social and experimental. Thus, for

example, a teacher could have a theoretical orientation to subject matter, or an experimental orientation to instructional procedures.

Elbaz saw the third dimension of teachers' practical knowledge, structure and generalizability, as reflecting 'varying degrees of generality' (1981: 49). She identified three terms which represented this idea of generality and teachers' purposes: rules of practice, practical principles, and images. She describes a rule of practice as 'a brief, clearly formulated statement of what to do or how to do it in a particular situation frequently encountered in practice' (1981: 61). Practical principles are less tied to specific situations and are the outcome of more deliberative reflection. The third category, images, are more elusive and intuitive. They seem to be bundles of teachers' feelings, values, needs and beliefs that tend to be expressed metaphorically. Their function is to guide the teacher's thinking and organize knowledge, helping them to realize their purposes, and they tend to be imbued with values. In portraying the specific combinations of these features held by an individual teacher, Elbaz used the notion of cognitive style. The notion of cognitive style is in itself a generalization, as it brings together many specific ways of acting to construct an overall characterization of a teacher's way of teaching.

Elbaz's work on teachers' practical knowledge has been enormously influential in teacher cognition research. Later work by Connelly and Clandinin (1985) expanded the notion by focusing on the personal aspect of practical knowledge, introducing the influential construct of 'personal practical knowledge', which they described as 'experiential, embodied, and reconstructed out of the narratives of a user's life' (p. 183). Taking up Elbaz's notion of images, they saw personal practical knowledge as built from powerful images which guide teachers' actions, linking their past experiences, the present teaching moment and their future plans. The work of pioneers such as Elbaz and Connelly and Clandinin has had a lasting impact, and the notion of teachers' practical knowledge is still a powerful construct in current teacher cognition research. It has been conceptualized in various ways depending on the context of different studies. Meijer, Verloop and Beijaard (2001) provide a useful review of the main characteristics of teachers' practical knowledge that have been identified in the teacher cognition literature:

- It is personal, as each teacher's PK is in some way unique to themselves;
- It is contextual, as it is constrained by the classroom situation;
- It is based on teaching experience and reflection on this experience;
- It is mostly tacit, as teachers often possess knowledge that they are unable to articulate;
- It acts as a guide to teachers' practices;
- It is closely related to content, that is, the subject/topic being taught.

(Based on Meijer, Verloop and Beijaard 2001: 171)

These characteristics highlight, at the same time, some of the advantages and problems with the construct. On the credit side, practical knowledge is seen to be grounded in teachers' lived experience of the classroom and as sensitive to the conditions of the contexts in which they work. On the debit side, its personal and often tacit nature makes it difficult to codify and generalize beyond individual teachers and local contexts. If the purpose in investigating teachers' practical knowledge is to combine it with the more formal and propositional types of knowledge to build a knowledge base for teaching, then this knowledge needs to be codified in some way. As Verloop, van Driel and Meijer (2001: 444) put it, 'it is not at all clear how formal theoretical knowledge and teacher knowledge can be integrated and used as 'input' in teacher education'. Perhaps the greatest progress towards this goal has been made by scholars working with the construct of pedagogical content knowledge (PCK).

Pedagogical content knowledge (referred to from now on as PCK) is a specific type of teachers' practical knowledge that is intimately related to the subject matter being taught. According to Hulshof and Verloop (2002), in using the construct PCK, we look at teachers' practical knowledge 'from a specific point of view and with respect to a specific content area' (p. 77). PCK is neither content knowledge nor pedagogical knowledge seen as separate entities, but an amalgam of both, and a kind of knowledge that is unique to teachers. The construct was originally developed by Lee Shulman (1987) and it opened up a research sub-field in teacher cognition, which, as Loughran, Mulhall and Berry (2004: 371) point out, is still very much 'an accepted academic construct'. This can be seen from the fact that in late 2010 a database search could come

up with 57 publications in refereed journals with the term 'pedagogical content knowledge' in the title, all of which had been published since 2005.

In Shulman's original conception of the construct, PCK consists in the ways in which teachers make content ideas accessible for learners, by using 'the most useful forms of representations of those ideas, the most powerful analogies, illustration, examples, explanations, and demonstrations - in a word, ways of representing and formulating the subject that make it comprehensible to others' (Shulman 1987: 9). Shulman also saw PCK as involving teachers' understanding of what makes makes specific topics easy or difficult for learners, including the pre-existing conceptions that learners have in relation to different topics in the curriculum.

In some ways, however, the notion of PCK has been a victim of its own success. Hashweh (2005) notes that, since Shulman's (and his own) original conception of the construct, PCK has become

> a category of teacher knowledge that curiously seemed able to encompass all other categories of teacher knowledge and beliefs—such as knowledge of subject matter, orientations, student characteristics, aims and purposes, resources and pedagogy. (p. 274).

In this sense, then, it is important to draw clear limits around PCK, otherwise, as Hashweh points out, it becomes 'synonymous with teacher knowledge and beliefs, and even practices for some.' (2005: 274). Hashweh's solution is to reconfigure PCK as a constellation of smaller units which he calls 'teacher pedagogical constructions' or TPC's. In this reconfiguration, PCK has the following characteristics:

1. PCK represents personal and private knowledge.
2. PCK is a collection of basic units called teacher pedagogical constructions.
3. Teacher pedagogical constructions result mainly from planning, but also from the interactive and post-active phases of teaching.
4. Pedagogical constructions result from an inventive process that is influenced by the interaction of knowledge and beliefs from different categories.

5. Pedagogical constructions constitute both a generalized event-based and a storybased kind of memory.
6. Pedagogical constructions are topic specific.
7. Pedagogical constructions are (or ideally should be) labeled in multiple interesting ways that connect them to other categories and subcategories of teacher knowledge and beliefs.

(Hashweh 2005: 277)

For the purposes of this thesis, Hashweh's reconfiguration of PCK has a number of strengths. Perhaps the most important is that it creates, in the teacher pedagogical construction (TPC), a unit of analysis which is more amenable to empirical investigation than wider, more vague conceptions of PCK. It does this by limiting the scope of PCK, and making it more concrete by emphasizing its links with specific teaching topics. This concreteness increases the accessibility of PCK and helps to avoid one of the problems in teacher cognition research, that of researchers and teachers failing to reach a mutual understanding of concepts and terms (Speer 2005). It highlights the importance of planning, allowing for a focus on teachers' conceptual constructions of a specific topic at the preactive stage of teaching. Another strength is that, although the TPC is a discrete unit of analysis, it is a way into exploring teachers' constructions of other epistemological categories, through the prism of teaching a single topic/unit. In talking about the teaching of a specific topic, teachers are likely to produce more general descriptions of their practices or voice their concerns. It is for these reasons, then, that this study focuses on each teacher's planning and teaching of one topic from the curriculum.

As well as narrowing the scope of PCK by focusing on 'basic units' tied to specific topics, it is also necessary to find ways of accessing and eliciting this knowledge. Loughran, Mulhall and Berry (2004) highlight the difficulty there has been in research on PCK to date in accessing and portraying this knowledge in ways which are clear and accessible for researchers and practitioners. As has been pointed out in previous work (e.g. Baxter and Lederman 1999) there have been serious methodological difficulties in accessing and portraying what is, in teacher cognition research, taken to be an internal, mental construct. Added to this, as Loughran *et al*. point out, is the fact that teachers are rarely asked to, and indeed rarely feel the need to, articulate the tacit understandings

underlying their practices. And of course, even in a situation where one is expected and willing to do so (such as becoming a mentor of novice teachers), it is not easy to find the words to explain one's practice. As Eraut puts it, 'When it comes to practical knowledge acquired through experience, people cannot easily tell you what it is that they know.' (Eraut 1994: 25).

In order to overcome these problems in researching science teachers' PCK, Loughran, Mulhall and Berry (2004) developed a tool which they called Content Representation (CoRe), which is a method for accessing and setting out teachers' understandings about teaching a particular topic. Used as an interview tool, it captures such aspects of PCK as what is necessary to learn about a topic, and what difficulties students are likely to have with it. In line with Hashweh's ideas, it focuses on a specific topic teachers are going to teach, and asks them to articulate, among other things, what main or 'big' ideas the students need to learn, what difficulties they are expected to have, and what strategies the teacher might use in overcoming these difficulties. When teachers complete a CoRe, they are making explicit aspects of their knowledge in teaching a topic that are likely to have been tacit until then. Or, they could be said to be constructing knowledge, or epistemological orientations, in discourse. Using CoRes means that how teachers construct aspects of a teaching topic becomes no longer 'internal', but publicly available and shareable. As discussed in the next section, in this study I adapt the CoRe tool to CLIL by adding a language component and use it as an instrument for exploring the teachers' constructions of PCK.

4.3.3 Four modes of knowing: an analytic framework for describing teachers' knowledge orientation.

As discussed in the previous section, Elbaz pointed out in her early (1981) study on teachers' knowledge, that the key issue is not listing the contents of that knowledge, but showing the different orientations teachers have to knowledge, whether they orient to ther knowledge as situational, theoretical, personal, social or experimental. In this section, the notion of teachers' orientation to knowledge is taken up and developed into a framework for describing orientations, or what I will call 'modes of knowing'. Such a framework will be able to show the relationships between teachers' personal and

practical knowledge, and the more formal or 'public' theories which are potentially available to inform their practices, but so often under-used. Woods and Çakir (2011) propose an outline for such a framework, in which teachers' knowledge can be positioned along two different axes, or continua, which relate to different dimensions of knowledge. The first dimension refers to the distinction between what Woods and Çakir describe as personal and impersonal knowledge. Personal knowledge is closer to the concept of belief, in that it has more affective colouring, is seen as subjective and even idiosyncratic and is closely linked to an individual's experience. Impersonal knowledge refers to what are seen as objective facts, universally acknowledged to be true and belonging to the public sphere. This knowledge spectrum, then, captures at one end what teachers may claim as their own personal beliefs and theories which they have gained through experience, while at the other end it captures more 'official' knowledge which is part of the public domain and may be encountered in published materials and taught in pre- or in-service training courses.

The second knowledge dimension captures the distinction between theoretical and practical knowledge. At one end of the scale, there is knowledge that relates to being able to do something, knowledge 'how to' or practical knowledge. This relates to the well-known distinction in cognitive theory between procedural (knowing how to) and declarative knowledge (knowing that something is the case) (see ten Berge and Hezewijk 1999). At the other end of the scale there is formal, abstract or theoretical knowledge, which is generalized and conveyed through language (Woods and Çakir 2011: 385). Teachers may thus orient either to 'ways of doing' which relate to specific occasions of practice, activities, learners, or to more generalized knowledge in which they invoke underlying principles that can be applied in more than one context and across different occasions. It is almost a cliché in teacher education circles that teachers tend to orient to the former, but, as Elbaz showed in her classic work reviewed above, teachers also orient to practical principles and images that guide them in their actions.

It is curious that Woods and Çakir in their extremely useful 2011 paper do not take the logical next step and combine the two dimensions. For the purposes of this study, I slightly re-label them ('impersonal' becomes 'public') and bring them together, with the vertical axis representing the theoretical-practical dimension, and the horizontal axis representing the personal-public dimension. This yields a framework for teacher

knowledge consisting of four quadrants, each one representing a 'mode' of knowing (see figure 4.2). The public-theoretical mode is knowledge that is abstract and generalized, normally the result of research and scholarly activity, and which belongs to the public domain (i.e. in books, journals, and more theoretically-oriented training materials). This is the 'philosphical' mode of knowing described by Connelly and Clandinin (1985). The public-practical mode refers to knowledge that is also widely available in the public domain, but which contains practical information, often consisting of procedures for the implementation of theoretical approaches. An illustration of this distinction can be seen in Richards and Rodgers' (2001) well-known framework for methods in language teaching, in which 'approach' refers to theories of language and language learning, with 'design' and 'procedure' referring to how these can be implemented at the levels of syllabus design and classroom practice. While they differ in their theoretical/practical orientations, both types of knowledge are firmly in the public domain, for example in books and training materials on implementing certain methods.

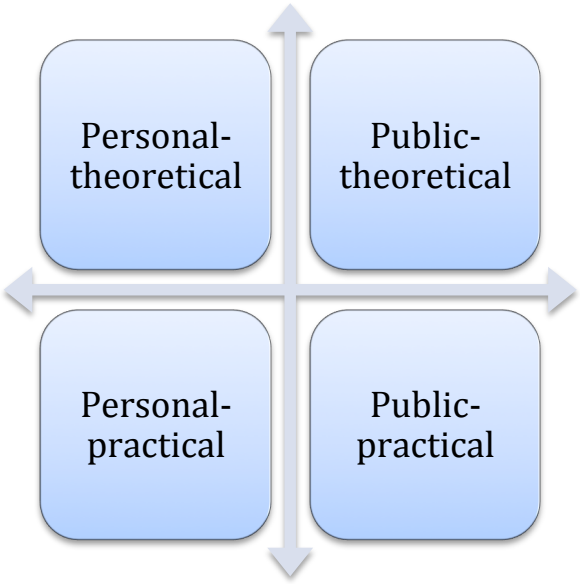

Figure 4.2 Four modes of knowing

Moving to the personal side of the framework, the personal-practical mode neatly captures a way of knowing which, as reviewed above, has been a focus of much attention in the teacher cognition literature, particularly in the work of Connelly and Clandinin (e.g. Connelly, Clandinin and He 1997). It refers to knowledge that teachers

come to own by using it in their classroom practices, and is in fact the knowledge that makes such practices possible in the first place. Such knowledge can have multiple origins, including of course the two 'public' quadrants in the framework, but its key characteristic is that it has been 'filtered' in some way and made useable by the teacher, so that it becomes part of his or her personal repertoire. The fourth mode of knowing, personal-theoretical knowledge, captures a dimension that has also been the focus of some attention in the teacher cognition literature. As seen above, it is related to Elbaz's conception of practical principles and both Elbaz's and Connelly and Clandinin's (1985) notion of images. This kind of knowledge can also be linked to what Connelly and Clandinin (1985: 184) describe as a 'narrative unity' of practice, built up out of powerful, often metaphorical, images that link, through rhythmic cycles of planning, teaching and evaluation, past experiences, the present teaching moment and future intentions. Connelly and Clandinin see this as forming part of their notion of 'personal practical' knowledge, but the distinction between the theoretical and practical ends of the spectrum in the framework proposed here allows for a finer-grained distinction. Thus, we can distinguish between knowledge inherent in action, similar to Schön's (1983) concept of 'knowledge-in-action' and more articulated forms of knowledge, which although still personal, can be expressed in terms of more generalized principles.

The proposed framework is not intended to 'essentialise' these modes of knowing, but to capture how what teachers know and can do can shift from context to context and over time. The framework allows for the possibility of trajectories in modes of knowing, as, for example, public-theoretical knowledge can be re-stated as public-practical knowledge, becoming personal-practical knowledge as it is incorporated into practice, and possibly personal-theoretical knowledge as teachers reflect on their experiences (see also Beijaard, Meijer and Verloop 2004, and, in TESOL, Edge 2011). And, indeed, such personal-theoretical knowledge can contribute to public-theoretical knowledge through structured forms of teacher inquiry, thus attending to the problem of the 'translation' of practical teacher knowledge into more formal knowledge mentioned by Verloop, van Driel and Meijer (2001). However, the approach in this study is not to track the development of teachers' knowledge over time, but to gain a greater understanding of how knowledge in one domain, that of language, is oriented to and used in CLIL teachers' practices and representations of practice. This means that the focus shifts to how teachers may combine knowledge from the different modes in their

practices and verbal representations of practice. A teacher may use knowledge from the public-practical mode in a description of something she did in class, as for example mentioning a technique or strategy encountered on a teacher-training course or in a teachers' resource book. Moving to the personal sphere, a teacher may construct what he did in class in terms of some generalisation about the characteristics of learners, expressed in language that does not reflect any 'public' theory.

The knowledge framework proposed here, then, allows a finer-grained analysis of how each perspective on language in the triperspectival model is used and represented by teachers. Thus, for example, in the language as a curriculum concern perspective, a teacher may build a description of her planning that includes the construct 'language of learning' as public-theoretical knowledge. Or, in the example above, the teacher, by generalising about what his learners can and cannot do, is operating within the language as a matter of competence perspective. Thus, as can be seen in table 4.1, CLIL teachers' representations and manifestations of language awareness can be characterised not only in terms of which dimension or perspective of knowledge about language is oriented to, but also the 'knowledge mode' in which it is represented or manifested.

	Public-theoretical knowledge	**Public-practical knowledge**	**Personal-practical knowledge**	**Personal-theoretical knowledge**
Language as a tool for learning				
Language as a curriculum concern				
Language as a matter of learners' competence				

Table 4.1 A framework for analysing representations of CLIL teacher language awareness (TLA-CLIL)

The framework brings together key constructs from the two literatures reviewed in chapter three and in this chapter - the roles of language in CLIL/immersion and related approaches, and research on teacher knowledge within the teacher cognition tradition. Thus, in graphic form, it encapsulates the conceptualisations of both key constructs in the thesis - the nature and dimensions of language in CLIL practice, and the types of knowledge that practitioners orient to. However, the framework is not intended as a rigid 'coding' device in which to fit all examples of evidence of teacher language awareness, either in classroom practice or in elicited verbalisations. Rather, its function is as an analytic frame which can structure the dialogue between the ideas as reviewed in the respective literatures and the evidence that is produced in the study's findings (Ragin 1994). It thus enables the researcher to link the findings from the study to the questions and concerns that have been debated and investigated in previous work, and to allow the findings to contribute to building knowledge within a specific field, in this case teacher cognition research in language education.

4.4 Teacher language awareness for CLIL (TLA-CLIL)

4.4.1 Teacher language awareness in language teaching and CLIL

It was argued at the beginning of the previous chapter that CLIL is essentially a language-based initiative. Its main justification is not that students will learn academic content better if they study it in a foreign language, but that, in doing so, they will develop better foreign-language competence than they would do otherwise. However, as was shown in the previous chapter, just what 'language' is taken to mean in CLIL contexts has often been left underspecified, and the triperspectival conceptualization of language introduced there was intended to provide a clearer specification of what the different roles of language in CLIL can be. It follows from the arguments presented in the previous chapter, that an awareness of language will need to be an essential component of any CLIL teacher's competence, and this will need to include a repertoire of resources for using language as a tool for learning their subject, identifying language learning objectives, and responding to different levels of student L2 competence.

Van Essen (2008: 3) points out that while it is 'no longer the buzzword it was some 10-15 years ago', language awareness is still a term that should be part of any informed

teacher's repertoire. Van Essen traces the history of language awareness movements, both on mainland Europe (mainly in Germany and the Netherlands), and the UK. In the UK, the movement arose out of the 1975 Bullock report and the 1988 Kingman report and efforts to introduce a language across the curriculum policy, influenced by earlier classroom-based research such as that by Barnes, Britton and Rosen (1969). Hawkins (1984) advocated an approach to language awareness in which students would study aspects of language in specialised courses, contrary to the mainland European approach which advocated integration of LA work with other curricular activity (and thus a precursor in many ways of CLIL approaches which would appear decades later).

Other researchers use the term 'knowledge about language' as an alternative to 'language awareness', although, as Cenoz (2008) points out, both terms are used pretty much interchangeably. Carter (1991) in an edited volume arising out of the LINC (Language in the National Curriculum) project, argued that knowledge about language was of essential importance for teachers as language is central to the processes of teaching and learning, and that conscious attention to language by teachers could benefit pupils' learning. Wong-Fillmore and Snow (2000) argue strongly for the need for all teacher education programmes to include educational linguistics. They identify five functions for which it is important that teachers have an enhanced knowledge about language: teacher as communicator; teacher as educator; teacher as evaluator; teacher as educated human being; teacher as agent of socialization. James and Garrett (1991) brought together and reviewed the key issues in the language awareness movement up to then, providing a definition of the concept as 'a person's sensitivity to and conscious awareness of the nature of language and its role in human life' (1991: 8), a definition which, as van Essen points out, is open to a wide range of interpretations. This is seen in the volume in which van Essen's chapter appears (Cenoz and Hornberger 2008), in which knowledge about language is conceptualized in a range of ways, from more individualistic cognitive perspectives to more of an emphasis on knowledge about language as a social or political phenomenon. One contribution to this volume, the chapter by Kasper (2008) sets out the approach to knowledge about language or language awareness which is used in this study. Including 'knowledge' under the superordinate term 'cognition', she highlights cognition as something that 'may be interactionally manifest as social actors go about their practical activities' and that is 'analyzed as embedded in social interaction and locally and contingently occasioned by

current interactional events' (Kasper 2008: 60). This definition is some way from James and Garrett's formulation, and is much more in line with the discursive constructionist approach taken in this study.

In L2 teaching, the last fifteen years have also seen an increased attention to language awareness or knowledge about language, both on the part of teachers and learners. Van Lier (1996) included 'awareness' as one of the three 'A' s (along with autonomy and authenticity) in his educational linguistics approach to language learning. Turning to language awareness for language teachers, Wright (2002) argued strongly that the linguistic content knowledge for language teachers needed to be presented in ways that linked it to classroom teaching strategies. Bartels (2005) is an edited collection that examines how knowledge about language emerges as an issue in a range of international contexts, and Andrews (2007) is a culmination of over a decade's work on the language awareness of foreign language teachers.

Turning to teachers' knowledge about language in CLIL/immersion contexts, Hoare's (2003) study on teachers' language use in late immersion in Hong Kong throws light on how content teachers' use and awareness of the L2 as a tool for learning can impact on their students' learning opportunities. In a study of six immersion science teachers, Hoare (2003) found wide differences in their awareness of language and its role in their teaching practices. The more 'language aware' teachers were more effective in helping their learners to make appropriate science meanings, for example by careful use of the language of science and the use of science genres, and by enabling the learners to put their experiences gained in doing experiments into words. Hoare claims that these practices had a positive effect on students' attainment. Based on this, and similar studies, Hoare and Kong (2008) argue that, for immersion education in Hong Kong to reach its potential, there needs to be greater attention to teacher knowledge and skills. This sentiment is echoed by Marsh (2008), who makes a cogent argument for placing language awareness at the heart of the CLIL enterprise, particularly in the area of teacher education:

> The design and implementation of initial and in-service teacher education which ensures that optimal goals are reached is likely to continue to be a key issue requiring research-based expertise. (Marsh 2008: 244)

Coyle, Hood and Marsh (2010) are clear about the importance of language awareness for the CLIL teacher:

> The CLIL teacher's own awareness of the vehicular language and the need to
>
> analyse the language carefully and systematically cannot be underestimated. The need to appreciate the learning demands in the vehicular language requires either an in-depth understanding of that language by the CLIL teacher or collaboration between the CLIL teacher and a language teacher.
>
> (Coyle *et al*. 2010: 44)

Thus, as well as an awareness of how learning content in an L2 may contribute to the development of foreign-language skills, CLIL teachers need to be equipped to analyse the language demands of learning the subjects they teach. This points to a real problem for CLIL teachers – the complexity of the task of integrating content and language. In spite of the fact that this is identified in the type of 'target competences' lists described above, and is a characteristic of the 'ideal' CLIL teacher, it is in fact a highly demanding area of teachers' knowledge, even (or particularly) for language teachers. Evidence of this complexity can be found in a study of pre-service ESL teachers. Bigelow and Ranney (2005) found that pre-service ESL teachers had much more difficulty in arriving at language objectives in planning lessons when they started out from authentic content and materials than when the starting point was a linguistic form in a structural syllabus. In other words, when they started out with a grammar point, they were much more able to find contexts in which to present and practise it, but when they started from a piece of content, they had difficulty in identifying the linguistic demands and opportunities in order to develop linguistic objectives. In the same volume, Bartels suggests that 'It would seem to be more cognitively simple to find one context for a particular grammar point and more cognitively complex to notice the great number of linguistic needs to complete a particular content task.' (Bartels 2005: 416). Some clues as to why this may be the case can be seen in this description by Coyle, Hood and Marsh of what is involved in planning for content and language integration:

> Identifying the language needed to learn in a CLIL classroom demands systematic analysis at the planning stage. The analysis reaches far beyond key words and phrases and other grammatical functions. It addresses progression in form and function, process and outcomes, and encourages the creative use of spontaneous language by learners. It requires an analysis of the linguistic genre - that is, the type of discourse and language which is embedded in different content subjects or themes.
>
> (Coyle *et al*. 2010: 59)

This is indeed setting the bar very high, and in many ways is asking CLIL teachers to be language experts, that is, to have a high degree of formal knowledge about language (KAL) which they can implement as pedagogical content knowledge (PCK) in their planning and teaching. However, it is not only identifying the language needed to learn in the classroom that may be important in CLIL. As was seen in chapter three, Lyster (2007) proposes a 'counterbalanced' approach, which would involve CLIL/immersion teachers proactively identifying 'recalcitrant' L2 forms, and providing noticing and practice activities to help 'destabilize learners' interlanguage' while participating in meaning-focused content activity. However, as Lyster himself points out, implementing such approaches requires 'a great deal of systematic planning and does not come naturally to content-based teachers' (2007: 5). And indeed, in a counterbalanced approach the demands are doubled, as CLIL teachers would be expected to exhibit *both* types of language awareness described by Bartels (2005), that is, the language awareness of language teachers as well as that of very language-conscious content teachers. The problem is that, as Andrews (2007) convincingly shows, it can by no means be taken for granted that even foreign language teachers have highly developed language awareness, which for them is related to subject knowledge. If knowledge about language for teachers for whom language is their subject is a problematic issue, we should be very careful about how high we raise the language awareness bar for teachers many of whom will see content learning as their primary responsibility.

Even if CLIL/immersion teachers are seen primarily as non-language subject teachers, there is already very ample scope for considering the knowledge about language necessary for effective content teaching. Taking the second perspective on language described in chapter three, language as a curriculum concern, there is the whole area of

subject literacies, that is, teachers' knowledge of the genres and registers through which knowledge is construed in their subjects. In this regard, Love (2010) posits a type of teacher language awareness that she labels 'Literacy Pedagogical Content Knowledge' (LPCK). This knowledge consists of three key components:

- knowledge about how spoken and written language can be best structured for effective learning;
- recognition that subject areas have their own characteristic language forms and hence entail distinctive literacy practices;
- capacity to design learning and teaching strategies that account for subject-specific literacies and language practices.

(Love 2010: 541)

Thus, it can be argued that *all* teachers, regardless of the subject, or whether they are teaching in an L1 or L2 or a mixture of both, need to develop LPCK to be effective in promoting their students' subject learning. As was mentioned in chapter three, researchers using the systemic functional model have worked with subject (history) teachers to develop this type of knowledge, with some success (Coffin 2006; Schleppegrell and de Oliveira 2006).

What these studies suggest is that CLIL teachers, as *subject* teachers, will need to develop the kinds of sophisticated knowledge about language that are theoretically the preserve of very language-conscious subject teachers. Language as a tool for learning, and as a curriculum concern, will have to become visible in ways that are not usually the norm among most subject teachers, as L1 teachers often underestimate the role of language in teaching/learning their subjects. But, as we have seen, researchers such as Swain and Lyster, in an immersion context, see content teachers as also responsible for formal language teaching, that is, proactively picking out L2 forms for explicit attention and providing noticing and practice activities to work on them, and also reactively responding to learners' L2 output through corrective feedback. And indeed, this vision of the CLIL teacher as an expert in both of these dimensions is borne out in the description of what CLIL teachers need to know about language in one of the frameworks for CLIL teacher education described above (Marsh, Mehisto, Wolff, and

Frigols Martín 2010). In this framework, target professional competence 3, content and language awareness, includes the following abilities that CLIL teachers are expected to develop (Marsh *et al*. 2010: 19-20):

- to deploy strategies to support language learning in content classes
- to promote learner awareness of language and the language learning process
- to describe how the first language can support additional language learning
- to model strategies for making the transition from monolingual to bi/plurilingual teaching and learning
- to devise and implement strategies that take into account key concepts such as (critical) discourse, domains and registers, Basic Interpersonal Communication Skills, Cognitive Academic Language Proficiency in order to promote language and content learning, as well as learning skills development
- to describe the implication of age for language learning and use
- to link language awareness issues to content learning and cognition
- to scaffold language learning during content classes
- to propose instructional strategies that take into account social constructivist theory, including exploratory and other forms of discourse that promote dialogic teaching and learning
- to draw on knowledge and theories from language learning fields such as SLA to propose instructional and learning strategies

It can be seen from this list that the kinds of language awareness expected of CLIL teachers goes beyond even the dimensions so far discussed in this section: identifying language objectives from content topics, subject literacies, and promoting L2 development through a counterbalanced approach. Many (if not most) foreign language teachers in the world would be hard pressed to produce descriptions of (critical) discourse, domains and registers, BICS, CALP, social constructivist theory, dialogic approaches to discourse, and SLA theories, let alone have access to a repertoire of resources that would allow them to implement any aspects of this knowledge

meaningfully. Of course, this also goes for the perspectives on language reviewed in the previous chapter, and, indeed, most of the elements from this list could be categorized as belonging to one of the three perspectives, with a predominance of language as a matter of competence.

If, as is evident from the list above, and indeed in Lyster's counterbalanced approach, CLIL/immersion teachers are expected to be language teachers, it will be instructive to look at research studies on what language awareness foreign language teachers do have or are expected to have. The most influential work in this area has been carried out by Andrews (2007) who has a long research trajectory on the nature of what knowledge about language is required for and used in foreign language teaching. As shown in figure 4.3, Andrews (2007) sees language teacher language awareness (TLA) as a sub-component of the over-arching construct of PCK, with TLA acting as a bridge between two other types of knowledge: knowledge of subject matter and language (L2) proficiency.

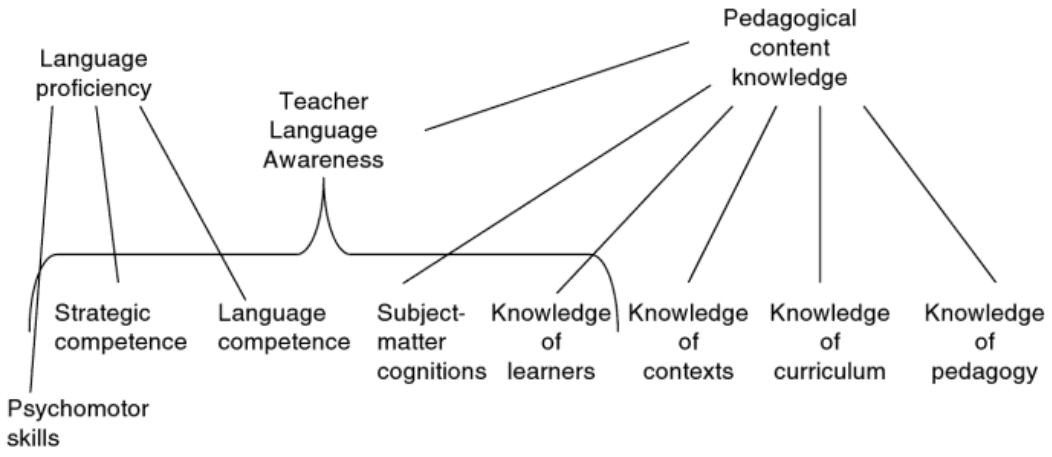

Figure 4.3 Andrews' model of teacher language awareness (TLA) (Andrews 2007: 31)

In Andrews' model, language teachers' TLA bridges their knowledge about language as a subject, and of their learners as language learners, and their own proficiency in using language. It is significant that in Andrews' model, TLA is a subset of PCK. This is by no means uncontroversial in language teaching, as, for some it is difficult to apply this construct in this educational context. For instance, Freeman (2002: 6) argues that when language is subject-matter, PCK becomes 'a messy and possibly unworkable concept.'

For Freeman, PCK is difficult to apply in language teaching because a language teacher's knowledge of subject matter would be defined in L2 terms, while knowledge of the learners' pre-existing conceptions would be based on their L1. Thus, a language teacher would have to take into account learners' conceptions about both the L1 and the L2. Freeman sees all this leading to a rather tangled web of representation involving three levels: the teacher's linguistic knowledge, the students' linguistic background and classroom interaction (Freeman 2002: 6).

However, Andrews, rather than seeing this complexity as a reason for rejecting PCK as a construct in language teaching, advocates taking it head on, and proposes a modified PCK in which TLA is what allows language teachers to work at the interface of these complexities. More specifically, he describes TLA as having three main features, in that it:

- embraces both knowledge of (language as) subject matter and language proficiency, and mediation of former through latter;
- is reflective: the L2 teacher needs metacognitive/metalinguistic awareness of subject knowledge and proficiency as basis for tasks of planning and teaching;
- encompasses knowledge of language from the learners' perspective (their interlanguage development and the extent to which language content in materials/lessons may pose difficulties for them).

(Andrews 2007: 28-29)

Interestingly, Andrews' view of TLA for language teachers maps almost exactly onto the triperspectival conceptualization of language in CLIL described in chapter three. The first feature relates to the L2 as a tool for learning ('mediation of subject matter through proficiency'), the second relates to L2 as a curriculum concern (explicit metalinguistic awareness and identification of language learning objectives in planning and teaching), and the third clearly relates to language as a matter of learners' competence (e.g. their interlanguage development). Thus, it would not take too much adapation to turn these three features into a potentially useful characterization of TLA for CLIL. TLA for CLIL teachers would thus embrace how knowledge of language interacts with knowledge of subject matter (language of learning), and of how their own

L2 proficiency is used as a tool for meeting pedagogic goals. They would need metacognitive and metalinguistic awareness of how language is implicated in teaching/learning their subject, with the ability to explicitly identify language objectives and the means for attaining them. They would also need to be aware of their CLIL students' needs, not just as learners of the content, but as language learners. They would need to plan the use of materials and activites with learners' L2 competence in mind.

Andrews goes on to argue that TLA for language teachers is equally important regardless of the language teaching methodology used. What happens is that it needs to manifest itself in different ways according to the aims and priorities of the approach used. For example, in a task-based approach in which there is a focus on form (i.e. language points are given attention but are dealt with incidentally as they come up), TLA will involve the following abilities:

- selection of suitable learning tasks
- considering linguistic demands of tasks and linguistic capacity of learners to cope
- dealing with L2 which emerges spontaneously, judging whether and when to intervene

(Andrews 2007: 33)

But even in a language teaching approach which is eminently meaning-focused (such as some types of content-based instruction, immersion or CLIL), teachers will have to:

- select texts providing comprehensible input
- devise tasks with an appropriate level of linguistic challenge
- control own language to level a bit above students' level of competence

(Andrews 2007: 34)

Thus teacher language awareness (TLA) is a much wider construct than simply declarative knowledge about grammar or other metalinguistic description, but involves complex skills relating to, for example, the selection and adaptation of learning materials, the design of learning tasks, and control or 'filtering' of their own and their learners' L2 output (Andrews 2007: 44-45). As such, TLA as a construct is eminently

applicable to CLIL teachers, and it must be an essential component of the formal and more practical knowledge they need for effective classroom practice.

However, because of the integration of language and content teaching in CLIL, the conception of TLA for CLIL teachers is even more complex than that of second or foreign language teachers. This can be seen in the fact that PCK for subject teaching, not just for language teaching, is in many ways a linguistic construct. If we look back at Shulman's original definition of PCK, we can see that it essentially consists of actions that are done, if not exclusively, at least pre-eminently, through language (representations of ideas, analogies, illustrations, examples, explanations, demonstrations). Indeed, Freeman, in considering content as opposed to language teaching, sees PCK as largely a linguistic matter:

> The teacher engages her students, and the students engage one another, with the content of the lesson through language. Thus the teacher's PCK on which that engagement is based, or perhaps which that engagement expresses in practice, is a highly linguistic undertaking. (Freeman 2002: 6)

So, for the CLIL teacher as a subject teacher, PCK is already a highly linguistic matter. In Freeman's idea, it is manifested in the very fact that, in the teaching of any subject, engagement with the content must be largely through language. The teacher's use of analogies, explanations, correction, narratives, questions etc. will all be key to this engagement, and will form a highly linguistic base of their PCK. It relates to the first component of Andrew's construct of TLA - the mediation of content knowledge through language proficiency. It is what Richardson (2002) describes as 'foundational' knowledge, that is, an instrument used to reach disciplinary goals and not discipline-specific knowledge itself. In terms of the triperspectival conceptualisation of this study, it clearly falls into the category of language as a tool for learning. Love's (2010) literacy PCK would fit into the second component of TLA, metacognitive/metalinguistic knowledge used in planning and teaching. It thus relates to the second perspective on language in this study, language as curriculum concern, as it involves the identification and description of explicit content-related language and literacy objectives. In this sense, teachers would need to have access to public-theoretical (and probably public-practical) knowledge about aspects of content-related

literacy, such as the genres and registers through which knowledge is construed in their subjects. In order to access this complex language awareness, it is necessary to have an instrument through which teachers may articulate what may be for them, largely, if not entirely, tacit knowledge. For this, we need to return to, and adapt, Loughran, Mulhall and Berry's (2004) CoRe instrument.

4.4.2 Adapting the CoRe: an instrument for the articulation of TLA-CLIL

As described in section 4.3.2, the CoRe instrument was developed for exploring PCK in science teaching, and, as such, it does not have an explicit language element. To be operationalized for CLIL, a language awareness component needs to be added. The first column in table 4.2 contains the original CoRe tool developed by Loughran, Mulhall and Berry (2004: 376). It captures essential aspects of PCK, maintaining the flavour of Shulman's original definition, by asking the teacher to articulate the 'big ideas' that she wants to focus on, relating them to learner characteristics, and the pedagogical strategies the teacher intends to use. The second column has been added for the purposes of this study. It 'mirrors' the content issues identified in the original CoRe by asking teachers to consider language dimensions of these issues. The way these questions are worded, and the way they mirror the content issues are designed to allow teachers to construct language awareness-related PCK, or TLA-CLIL in a way which is very close to the spirit of Shulman's concept of PCK. It is a way of seeing the topic through 'language eyes', and it relates the language dimension of the topic with learner characteristics and instructional strategies.

In both columns, the instrument avoids using terms that may cause difficulties for researchers and teachers in establishing mutual understanding, a problem that is common in teacher cognition research and which will receive detailed treatment in chapter five. Even so, it is quite a demanding instrument to use, as it focuses on issues that may be tacit knowledge for teachers, and which they may have never had to articulate before, especially the language dimension for content teachers. For this reason, in the study it is used as an interview tool after teachers have had an opportunity to either consider the questions or actually fill it in. By using it in the interactive context of an interview it is possible to probe and clarify ideas, thus allowing teachers to produce richer descriptions of their practices. While Loughran *et al.* used this

instrument with groups of teachers, in investigating CLIL contexts this is more difficult, as groups of CLIL teachers will usually be teaching different subjects. In this study, it is used with individual CLIL teachers as a way of allowing them to construct aspects of

IMPORTANT CONTENT IDEAS/ CONCEPTS		**TLA COMPONENT**	
1. What you intend the students to learn about this topic.	Big idea 1, 2, 3 …	1. What language you intend the students to learn/use in order to talk/write about this topic.	Big language point 1, 2, 3 …
2. Why it is important for students to know this.		2. Why it is important for students to learn/use this particular language.	
3. What else you know about this topic (that you do not intend students to know yet).		3. What other language related to this topic that might be important for the future but can be introduced later.	
4. Difficulties/limitations connected with teaching this topic.		4. Language difficulties/limitations students are likely to have connected with this topic.	
5. Knowledge about students' thinking which influences your teaching of this topic.		5. Knowledge of how students use language which influences your teaching of this topic.	
6. Other factors that influence your teaching of this topic.		6. Other factors related to the fact that the teaching is in a L2 which influence your teaching in this topic.	
7. Teaching procedures (and particular reasons for using these to engage with this topic).		7. How you might adapt (if necessary) teaching prodecures to take into account the fact that students are studying this topic in L2. Are there any language-teaching procedures which could be used?	
8. Specific ways of ascertaining students' understanding or confusion around this area (include likely range of responses).		8. How you might use language/interaction in ascertaining students' understanding or confusion in this topic.	

Table 4.2 CoRe for CLIL incorporating KAL component (adapted from Loughran, Mulhall and Berry 2004: 376)

their teacher pedagogical constructions (TPCs - Hashweh 2005) for the units they chose to be observed for the study.

The CoRe is a useful tool for expanding on Hashweh's idea that PCK in the form of TPCs is particularly related to planning. Planning is crucial to PCK, with Shulman claiming that

> the essence of the act of pedagogical reasoning, of teaching as thinking, and of

> planning - whether explicitly or implicitly - the performance of teaching (...) is as much a part of teaching as is the actual performance itself. (Shulman 1987: 16-17).

However, in spite of its theoretical importance, Hasweh points out that PCK research has tended to neglect planning, and that the time is right for a renewed interest in this aspect of teachers' practices. The CoRe instrument allows access to the 'pedagogical reasoning' involved in planning by giving the teachers the opportunity to first reflect and then talk about their ideas for the unit at the preactive stage of teaching. However, it is important to be clear that the CoRe does not investigate planning itself as an activity. As Suchman (2007) has pointed out, planning needs to be understood as a situated activity, and not a causal factor which explains events as they unfold. Using the CoRe at the preactive stage of teaching gives the teachers the opportunity to talk *about* their plans for the unit, producing representations of, for example, aspects of the topic, activities they will use, and learner characteristics in relation to the topic. It does not allow us to look over their shoulders *as* they engage in the activity of planning. In fact, in discussing the issues raised in the CoRe, teachers may claim that they do not in fact do much detailed planning.

The CoRe instrument thus allows the teachers to produce rich descriptions of their conceptualizations of the topic in relation to a wide range of aspects of their practices. Teachers can 'script' their descriptions as what they generally do when teaching the topic or they can provide story-based one-off accounts of things that happened teaching the topic on another occasion. In Elbaz's (1981) terms, they can produce rules of practice, general principles and images. However, all of this happens at some remove from the classroom. In a sense, teachers are imagining the teaching of the topic. The picture of their pedagogical construction for the topic needs to be completed by observing what they do in the classroom. The CoRe is the starting point in building a picture of how CLIL teachers construct and use their TLA-CLIL. As we move into the interactive phase of teaching the topic we continue to build this picture by using and adapting Hashweh's conceptual framework. The aim is to build a representation of the CLIL teachers' TLA as it is manifested in their verbal commentaries before and after teaching, and during classroom interaction. Throughout, the focus is on how the teachers' TLA is manifested as they engage in a range of practices: classroom teaching

and the production of verbal commentaries in interaction with the researcher. It is also important to point out that the focus of the study is not on individual teachers and their characteristics. This is in line with Loughran, Mulhall and Berry's view that PCK is not to be seen 'solely as something residing in an individual teacher' (2004: 374). In their work, PCK is thus not just something belonging to individuals, but is shared knowledge distributed across teachers at a collective level. Of course, there is individual diversity and even idiosyncrasy in teaching practices, but the study aims to examine the phenomenon of TLA-CLIL as a collective entity, as something distributed across different individuals, in the ways in which their practices are organized and (re) constructed in verbal commentaries.

In using the CoRe to allow the teachers to articulate their TLA as an aspect of their PCK, it is important to bear in mind that what they will produce will indeed be constructions, that is, discursive representations of reality (Potter 1996). This shift to seeing PCK as constructions is also in line with current thinking, as can be seen in this statement from Hashweh, in which he highlights the constructed nature of PCK in the shape of teachers' plans:

> The resulting plan, whether mental or written, is a construction, not as tangible as the end-product of an architectural design process, but a construction none the less. Lately, many educators have accepted constructivism as an orientation, and have described learning as a constructivist process. *If anything among all teacher knowledge categories is truly constructed, it is definitely the PCK category*. (Hashweh 2005: 278. Italics added.)

Hashweh here is using 'constructed' more in constructivist than in constructionist terms. That is, his approach is essentially cognitivist in that the teachers' constructions are taken to exist as some kind of mental representations, rather than as constructed in discourse. This thesis takes the 'constructed' nature of PCK further by adopting a social practice and constructionist perspective, in which PCK is examined as teachers' discursive representations of aspects of their worlds of practice. Thus, the CoRe is seen, not as an instrument for accessing a hidden mental realm of knowledge and belief, but as means for getting teachers to construct versions of their reality, as it relates to the

role(s) of language in teaching a specific unit, and by extension, to their practices generally.

4.5 Chapter summary and conclusion

This chapter has set out a framework for the examination of the central phenomenon under investigation in the study, CLIL teachers' language awareness (TLA-CLIL). The chapter began with a review of research on characteristics of CLIL teachers and teachers who use related approaches to combining content and language. This provided a backround for a characterization of the broad population of teachers who taught in the Bilingual Project which is the setting for the study. It was argued that research on what CLIL and other teachers who teach language and content together think, believe and do, lacked a coherent framework. To fill this gap, Borg's (2006) framework for the study of teacher cognition in language education was introduced. The importance of using consistent terminology and concepts was highlighted, and the chapter identified and defined the key constructs of teacher knowledge, practical knowledge, pedagogical content knowledge and teacher language awareness. The tripersectival conceptualization of language introduced in chapter three was combined with four modes of knowing to provide an analytic frame for constructing a dialogue between the ideas in the literature and the evidence produced in the study's findings.

The chapter then focused more closely on the construct of teacher language awareness (TLA), drawing out the similarities and differences between Andrews' (2007) work on TLA for language teachers and the TLA required for CLIL teaching. In line with Andrews' model, TLA for CLIL was characterized as a component of CLIL teachers' PCK, but with added complexity due to the integration of content and language. An instrument for eliciting aspects of CLIL teachers' TLA as an aspect of their PCK, based on Loughran *et al*.'s (2004) Content Representation (CoRe) was introduced. The chapter then shifted the focus to how recent work on PCK was moving from a more individualist perspective to seeing it as a socially shared and constructed phenomenon. Taking such an approach has clear methodological implications, relating to what kinds of research questions (if any) can be asked, what kinds of data can be used, how they

are analysed, and what sorts of claims can be made. All of these topics are dealt with in the next chapter, which describes the methodological approach and design of the study.

Chapter 5. Methodology

5.1 Introduction

Chapter four completed the three chapters which reviewed the relevant literature and introduced the conceptual frameworks for the study. Chapter two described CLIL as an educational and sociolinguistic phenomenon, chapter three focused on the roles of language in CLIL teaching, and chapter four positioned the study within teacher cognition research, focusing on the construct of teacher language awareness (TLA) as an aspect of pedagogical content knowledge (PCK). The purpose of this chapter is to describe the study's overall methodological approach, research design, participants, data collection methods, and the data analysis procedures. The chapter begins by setting out the research questions which drove forward the study. This leads into a description of the participants in the study, the data collection procedures used, the data which were collected and the process by which they were analysed. The study's case study design is then set out, with the focus on how a multicase study is more concerned with the understanding of a phenomenon than with individuals as analytic foci. This is followed by a brief section in which ethical issues relating to the study are discussed. The rest of the chapter consists of a detailed rationale and justification for the study's overall methodological approach, which is described as a response to some serious theoretical and methodological issues in teacher cognition research, particularly the 'discourse dilemmas' that emerge from the use of verbal commentaries as data. A methodological approach informed by selected practices from discursive psychology and conversation analysis is proposed.

5.2 Research questions

The research questions for the study emerge out of a dialogue between the ideas presented in the literature reviews in chapters three and four, and my own experience gained in early encounters with the field. That is, an initial interest in CLIL as a language education initiative, and how this might be reflected in content teachers' practices and understandings was given structure by an examination of how language was viewed in the CLIL/immersion literature, and how language awareness was a key concept in teacher cognition research in foreign language teaching. Because of the

study's focus on both teachers' classrooms practices and their cognitions, it was important that the research questions captured both dimensions, but without one acting as an 'explanation' of the other. The research questions for the study, then, are:

1. What are the relationships between the teachers' pedagogical goals and the organization of interaction in their classrooms?
2. How do the teachers construct the relationships between interactional organization and their pedagogic purposes in postactive reflective comments?
3. How do the teachers describe the roles of language in their practices in the pre-teaching CoRe interviews?
4. What aspects of language do the teachers focus on proactively in classroom interaction and how do they deal with them?
5. How do the teachers 'construct' the learners in terms of their linguistic competences?
6. How do the teachers respond reactively to learners' displays of linguistic (in)competence in classroom interaction?

The six research questions are organized in pairs, each pair corresponding to one of the perspectives on language introduced in chapter three, and to one of the dimensions of language awareness outlined in chapter four. Questions one and two relate to language as a tool for learning, and to how teachers use their proficiency and interactional competence to mediate content and language as subject matter. Questions three and four cover language as a curriculum concern, and the metacognitive/metalinguistic knowledge teachers need to identify and act on specific language points in planning and teaching. The final two questions adopt the perspective of language as a matter of competence, and the ways in which teachers need to be aware of and take into account learners' language needs and abilities.

5.3 Participants, data collection and analysis processes

Before setting out and justifying the methodological approach and research design used in the study, this section provides a brief description of the participants (teachers and students), the context they worked and studied in, and how they were recruited for the study. This is followed by a description of the data gathering procedures, the data

collected and the analytic procedures used. I begin with the four teachers, some of their characteristics, the context they worked in, and how they were recruited for the study.

The four teachers who agreed to take part in the study (three female, one male) all worked in the bilingual department of a secondary school which had been participating in the BEP since 2004. They were all content teachers, although two (the geography and the history teachers) were also qualified as EFL teachers. They had no previous experience of working in bilingual education prior to joining the department, and all had between two and four years' experience in teaching their subjects in English. The subjects taught were biology, technology, history and geography. In initial interviews, all the teachers expressed high degrees of motivation and satisfaction to be working in the Bilingual Project. They shared a view that teaching their subjects in English had energised their teaching careers, and all felt that they were in an intensive period of learning and professional development. This was in spite of a relative lack of formal teacher training in CLIL or related methodologies. They had all had short visits to the UK which involved brief periods of in-service training and school visits, as well as in-service sessions, some held at a nearby teacher-training centre. All four teachers, in common with the other teachers in the BEP, had to have provided evidence of a sufficient level of language proficiency (around C1 in the CEF) to teach on the programme, as well as being certified teachers of their subjects.

The teachers taught their subjects in English to students in the school's bilingual section. These students were taught up to 40% of the curriculum in English for the first four years of secondary education, that is, until the end of compulsory secondary education. This usually involved studying three subjects in English (science, technology and social science) as well as having an additional two hours of English, bringing the total of hours of English lessons to five per week. English lessons did not use an EFL methodology, but rather what was described as a 'literacy' approach, in which students followed a curriculum similar to that taught in English subject lessons in the UK. The students in these classes mostly came from a primary school in the catchment area which also belonged to the BEP, so that these students had been taught content through English since they were five or six years old. Although early observations produced evidence that there were quite wide variations in the students' English proficiency, it was clear that they were confident in using English as a medium of instruction for a

wide range of classroom purposes, including both procedural matters and talk about curricular content. The classes in the study ranged from year 7 to year 10, so that the students ranged in age from 12 to 16.

My access to the field was gained through a long process of becoming familiar with these teachers and others in bilingual schools in the Madrid area through my involvement in a Comenius project on CLIL teacher education (Hansen-Pauly *et al*. 2009). I had also led in-service training sessions on aspects of CLIL methodology at the local teacher training centre, which had been attended by three of the four teachers. It had become clear that sufficient trust to be allowed into these teachers' classrooms could only be gained through a gradual process of establishing my own credibility as someone who had something to offer them. Through my involvement in the Comenius project, I was able to carry out a small pilot study in which I got access to one recording of a lesson by each teacher, and was able to carry out informal interviews. After two years of intermittent contact with the field, I gained their assent to take part in the final study, and data collection took place over two periods - November-December 2008, and April-May 2009. I also gained informed consent from the head of the school and the parents of all the children in the classes.

On agreeing to take part in the study, the four teachers were asked to choose a topic from the curriculum which they normally teach. I explained to them that they would have to fill in a sheet (the CoRe instrument) in which they would reflect on their approach to teaching the content topic in the unit, and how they approached language issues in teaching this topic. We then arranged for two consecutive lessons in which they taught aspects of this topic to be video recorded. Because of the study's focus on teacher cognition, in which data sources other than classroom interaction would be used, I decided that two lessons (as well as a third lesson from the pilot study) would provide enough data for the study. In any case, as Seedhouse (2004) points out, in most CA-informed studies of classroom interaction, a corpus of five-ten lessons is usually considered to be sufficient. The teachers decided on the following topics and classes:

	TOPIC	CLASS
Teacher A (biology)	Genetic variation	Year 10 (9 students)

Teacher B (technology)	Materials (making a wooden toy)	Year 7 (20 students)
Teacher C (history)	Medieval art (iconography)	Year 9 (18 students)
Teacher D (geography)	Development	Year 9 (16 students)

Table 5.1 Teaching topics and classes chosen by teachers in the study

The teachers were given a few days to read and complete the CoRe sheet, which they brought to the pre-teaching interview. The interview schedule followed the structure of the CoRe instrument, with questions focusing on how the teachers saw the topic from the students' point of view, both in terms of dealing with the content and any language-related issues. These interviews were audio-recorded and transcribed for analysis.

Within a week of carrying out the CoRe interview, the two lessons from the unit in question were observed and video recorded. The video recordings were made with a single, hand-held video camera. As Heath *et al*. (2010: 53) point out, 'In many cases a single video camera will suffice. Indeed, multiple cameras tend to complicate data collection and analysis'. This was the decision taken in this study, as the focus was mostly on the teachers' practices, it was sufficient to have one camera focused on him/her, but including students he/she was interacting with. As well as the sound captured by the camera, a good quality digital sound recorder was used as back-up and to have access to better-quality audio files for transcription.

Within a week after the two video recordings, the teachers participated in individual video-based comments sessions. In the intervening week, I had chosen four or five vignettes from the two lessons, in which issues pertaining to the teachers' language practices were salient. As this was not an action-research project, I decided that it was better for me to choose the vignettes, in order to keep the study focused and to ensure a dialogue between the ideas and frameworks of interest to the study and the evidence as seen in the video data, and the teachers' responses to it. These video comment sessions were also audio recorded and transcribed. Table 5.2 shows the different stages in the study, the different data collection methods used at each stage, the raw data produced, and the amount of data produced.

STAGE OF STUDY	DATA COLLECTION METHOD	TYPE OF DATA PRODUCED	AMOUNT OF DATA
1. Focus on teachers' pre-active constructions of language-related practices based on CoRe task.	Semi-structured task-based interviews	Audio recordings and transcripts of interviews	4 x 1 hour interviews (approx 28,000 words)
2. Focus on teachers' language-related practices in the classroom.	Video recordings of classroom interaction.	Video and sound files of classroom interaction and transcripts.	12 x 1 hour lessons. (approx 60,000 words)
3. Focus on teachers' post-active constructions of practice.	Videoclip-based stimulated comment procedure.	Audio recordings of teachers' comments and transcripts.	4 x 1 hour interviews. (approx 12,000 words)
TOTAL			20 hours of recorded interaction. (Approx. 100,000 words).

Table 5.2 The data collected for the study

As can be seen, a very substantial amount of data was collected. This has important consequences (and dangers!) for the methodological approach taken in this study, which relies on fine-grained analysis of interaction rather than, for example, content analysis or grounded theory. Potter and Wetherell warn of the danger of 'getting bogged down in too much data and not being able to let the linguistic detail emerge from the mountains of text' (Potter and Wetherell 1987: 161). To avoid this problem, they suggest that discursive studies can use small sample sizes:

> Because one is interested in language use rather than the people generating the language and because a large number of linguistic patterns are likely to emerge from a few people, small samples or a few interviews are generally quite adequate for investigating an interesting and practically important range of phenomena. For discourse analysts the success of the study is not in the least dependent on sample size. The crucial determinant of sample size, however, must be, here as elsewhere, the specific research question. (Potter and Wetherell 1987: 161)

In the case of this study, the research questions relate to the teachers' language-related understandings and practices as they are produced during interaction. This means that in an initial coding phase, segments of interaction that related to these constructions were identified for closer analysis. As Wiggins and Potter (2008: 84) explain, 'The coding stage is the precursor to the analysis and involves sifting through the larger data corpus for instances of a phenomenon.' In this way, the unmanageably large data corpus (for a study using micro-analysis of interaction) was reduced to focus on those stretches of interaction in which the phenomenon of interest in the study (teachers' language-related practices and understandings) were seen to be salient.

The data analysis of the classroom interaction took place in three phases according to the three relevant research questions (1, 3 and 5). Thus, for research question 1, which focused on the relationships between the teachers' pedagogical goals and the organization of interaction in their classrooms, the corpus of twelve lessons was divided into segments in which the interactional organization displayed participants' orientation to a particular pedagogic agenda. These segments were assigned to emerging categories, with the categories changing as new stretches of interaction were added, until the analysis 'settled' with any segment of interaction being clearly allocated to one of the five categories, or micro-contexts. For research question three, all examples of a pre-emptive focus on language in the corpus were identified, and a collection built. This collection was then sub-divided into the different interactional ways of dealing with language pre-emptively which are analysed in chapter seven. For research question five, a similar process was used, with a collection of all examples of a reactive focus on language being built, which was then subjected to a more fine-grained analysis, the results of which are presented in chapter eight.

The analyses of the verbal commentaries followed a different trajectory. For question two, the post-teaching video comments were examined for ways in which the teachers provided accounts or explanations of the pedagogic goals they pursued in classroom interaction. These accounts were possible to identify as they were situated in the interaction just after the playing of the video, and my request for the teacher to say 'what was going on'. As each account was produced after viewing an example of interaction in one of the micro-contexts, the accounts were examined for ways in which

the teachers' descriptions of their pedagogic goals aligned or disaligned with the pedagogic foci as demonstrably oriented to in the emic analysis of the interaction. In responding to research questions four and six, the teachers' verbal commentaries in the CoRe interviews and the post-active comments were examined for examples of constructions relating to language as a curriculum concern, and as a matter of learners' competence. Collections were built of segments of interaction where these concerns were topicalized.

5.4 Research design: multicase study

This section describes and justifes the research strategy adopted in the study, that of case study, specifically multicase study. Yin describes the defining characteristics of case study as a type of empirical enquiry. For Yin, a case study:

- investigates a contemporary phenomenon within its real-life context, especially when
- the boundaries between phenomenon and context are not clearly evident;
- copes with the technically distinctive situation in which there will be many more variables of interest than data points, and as one result
- relies on multiple sources of evidence, with data needing to converge in a triangulating fashion, and as another result
- benefits from the prior development of theoretical propositions to guide data collection and analysis.

(Yin 2003: 13-14)

These considerations open up interesting perspectives on the use of case study as a strategy in the study of teacher cognition. CLIL teachers' cognitions and practices are a contemporary phenomenon within the real-life context of education and schooling. The boundaries between the teachers' language awareness as a phenomenon and the various dimensions of context (for example, as seen in Borg's framework) are not clear, but are worthy of investigation. The teachers' understandings and practices relating to language may show an orientation to a range of contextual factors, such as the curriculum goals, programme expectations, or classroom constraints. And of course, a major focus of the

study is on how such practices and understandings emerge in different ways in the various interactional settings of the study.

Although the study relies on one main type of evidence (audio and video-recorded and transcribed interaction), it does draw on multiple sources. The teachers discursively construct their practical understandings of language in three different settings: individual CoRe task interviews, classroom teaching, and videoclip comment sessions. However, it is important to point out that this use of multiple sources of evidence does not imply a 'triangulation' strategy in the traditional sense. For many qualitative methodologists, such as Bloor (1997), triangulation has been seen as a positivist method, with the assumption that different methods somehow converge on the same essential reality. Silverman (2001) criticises this view of triangulation as 'using one account to undercut another', and points out that the major problem with triangulation is 'that, by counterposing different contexts, it ignores the context-bound and skilful character of social interaction and assumes that members are 'cultural dopes', who need a social scientist to dispel their illusions.' (p. 235). This relates to the argument above that this study does not use evidence from different settings (i.e. interviews and the classroom) to expose putative 'inconsistencies' between teachers' 'beliefs' and practices.

As for the last part of Yin's definition, the study uses previously developed theoretical propositions, specifically the triperspectival conceptualization of language and a range of ideas from teacher cognition research, to guide data collection and analysis. Thus, a case study approach is an ideal strategy for bringing about the necessary dialogue between the ideas that motivate and frame the research and the evidence that is produced through the various data collection methods. Specifically, the study builds on the prior development of theoretical propositions about teachers' language awareness in foreign language contexts, and uses the evidence gathered in the study to reconceptualize this construct in another context, CLIL teaching. In this sense, its main focus is not on the CLIL teachers themselves, but on the construct.

When case studies set out to explore and examine a specific construct, such as language awareness in this study, a multicase design is a recommended strategy. In multicase studies, the focus is not on the individuals who take part, but on a specific phenomenon

which they manifest, which Stake (2006) calls a 'quintain'. Stake describes the role of the single case in a multicase design:

> In multicase study research, the single case is of interest because it belongs to a particular collection of cases. The individual cases share a common characteristic or condition. The cases in the collection are somehow categorically bound together. They may be members of a group or examples of a phenomenon. Let us call this group, category or phenomenon a 'quintain'.
>
> (Stake 2006: 4-6)

The cases in the study fit this description very well. They all share a common characteristic or condition: they are teachers who are teaching another subject through English as a foreign language at secondary level. In this sense they are categorically bound together. The are members of a group at institutional level - the bilingual department in one school, as well as belonging to larger project at programme level - the Bilingual Education Project (BEP). They are also, for the purposes of the study, examples of a phenomenon, in that their teaching practices are organized around a shared practical understanding of the role of language in teaching their subjects. These practices are shared not in the sense that they may explicitly discuss them together (although that is possible), but in the sense that it will be possible to find evidence of language-related practices and understandings that cut across individuals.

The ultimate goal of the study, then, is not the teachers themselves or their individual teacher language awareness for CLIL (TLA-CLIL). What the study aims at is an understanding of the phenomenon, the quintain, TLA-CLIL. As Stake puts it,

> Multicase research starts with the quintain. To understand it better, we study some of its single cases - its sites or manifestations. But it is the quintain we seek to understand. We study what is similar and different about the cases in order to understand the quintain better. (Stake 2006: 6)

Stake's use of the terms 'sites' and 'manifestations' is propitious for the social practices approach to teacher cognition of this study. The analytic focus is on sites or settings of social practice including discursive representations produced in them, rather than any

essential characteristics of the teachers themselves. TLA-CLIL is thus seen as an aspect of the practical understandings around which such social practices are built, and as a phenomenon which has different manifestations according to the interactional setting.

One criticism which has been leveled at the case study as a research strategy is its supposed weakness in external validity, i.e. in the assumption that it is not possible to make valid generalizations based on individuals or small numbers of cases. Some writers on case studies seem to accept and even embrace this assumption, seeing it in fact as more of a strength than a weakness. An example is Stake (2000) who claims that one strength of the case study method is that it can afford what he describes as 'naturalistic generalization', which is 'arrived at by recognizing the similarities of objects and issues in and out of context and by sensing the natural covariations of happenings.' He sees this type of generalization as being developed from experience and 'the tacit knowledge of how things are, why they are, how people feel about them, and how these things are likely to be later or in other places with which this person is familiar.' (Stake 2000: 22).

Yin (2003) has a different approach to generalization from case studies. Rather than generalizing from samples to a populations as in survey studies, he sees case studies as allowing 'analytic generalization', in which results from case studies are used to make generalizations about theoretical propositions rather than populations. Verschuren (2003) takes the argument further by claming that case studies do in fact have the potential of allowing generalization to populations, especially in cases where there is a limited number of variables. The approach taken in this study is not to make claims about external validity in terms of generalizing to a population, but to adopt Yin's concept of analytic generalization. That is, by examining the construct of TLA in a context different to the one in which it was originally developed, and by constructing a dialogue between the ideas and theoretical frameworks used in the study and the case study evidence produced, it is possible to arrive at a more general analytic generalization about the nature of TLA-CLIL. That said, the study also takes into account Stake's notion of 'naturalistic generalization'. It aims to have naturalistic validity for CLIL practitioners, in that they should be able to take what is useful for them in the portayal of the teachers' practical understandings of language, and judge for themselves how relevant this is in the places with which they are familiar.

5.5 Ethical considerations

Robson (2011:199) shows how ethical issues can emerge at the beginning and continue throughout the whole study. He highlights such ethical issues as the rights of individuals not to take part, the necessity of obtaining informed consent, maintaining confidentiality, and the responsibility of researchers for the knowledge they have acquired. Along similar lines, Kvale (2007:24), in the context of interview research, identifies three central ethical issues – informed consent, confidentiality and consequences of the research. He points out that ethical issues are not a separate stage in the process of carrying out interview research, but are inherent throughout the whole process and conduct of a study. How these dimensions of ethical issues affected the study are briefly outlined below.

By giving their consent to take part in the study, the teachers were committing themselves to a substantial amount of work. This included completing the CoRe task, partipating in the CoRe interview, having at least two lessons video-recorded, and doing the videoclip interview. It was important from an ethical point of view to make very clear to them just what that commitment involved. The teachers were aware that they were recruited as 'bilingual teachers', or 'teachers in the bilingual department'. There was no mention of them being recruited as 'CLIL teachers', as this would have been something of an etic imposition, given that, as we have seen, the acronym was not generally used to describe the approach of the Bilingual Education Project (Dobson *et al*. 2011). This project had already been the focus of considerable attention and study, and this was oriented to in the ways in which the participating teachers were informed of the research aims: to gain greater understanding of what teachers think and do in a successful bilingual education environment. Consent was also obtained from head teachers and parents for pupils in the teachers' classrooms to be observed. I drafted a letter to parents in Spanish asking for permission to observe and record in their children's classes (see appendix B).

Confidentiality was maintained by changing or omitting the names of all participants in the study, and any place names which might help to identify the classrooms described.

In any presentations or publications arising from the study, where it was considered beneficial for a teacher to have his or her name mentioned, this was negotiated with that teacher. As Robson (2011: 209) points out, protection of confidentiality should not mean that participants are deprived of credit and recognition, particularly in cases where examples of good practice are disseminated.

It is the responsibility of the researcher that knowledge gained in a study is used with sensitivity to the feelings of those concerned, whether those participating directly or the wider social groupings of which they will be seen as representatives. One concern which I was aware of in studies of teaching is where researchers present accounts of practices which they take to be ineffective. It would seem to be unfair and denigrating for a teacher to give his or her consent to participate in a study, often at the expense of extra time and emotional commitment, only to have his or her practice portrayed in a negative light. It was thus important to make as clear as possible the object of the study in general, making clear that there was no aim to be critical of the teachers' practices or to be evaluating what happened in their classrooms in any way. The time I took in informal contacts (in breaks, in other contexts), and at the beginning of the different interview encounters, to make these issues clear I considered well spent. Both in the way the study's aims were expressed by the researcher and the tone used in its conduct, helped to reinforce the idea that the motive for the study was not prescriptive, and that it sought a greater understanding of their practices in CLIL classrooms, hopefully to the benefit of all concerned. As the study progressed, these concerns diminished as it was clear from the analysis of the data that the CA approach taken was able to deliver insights about the teachers' and pupils' interactional comptences which in no way implied any negative commentaries on classroom practices. Any implications for possible improvements in practice were able to be expressed in positive and general terms.

5.6 Methodological approach

5.6.1 A discursive constructionist perspective on action, knowledge and understanding

Having provided an overall description of the study's research questions, participants and data-gathering and analysis procedures, the rest of this chapter deals with more fundamental issues about the methodological approach taken by the study. Some fundamental problems pertaining to the role of discourse data in the study of teacher cognition are highlighted and addressed. As will be seen, the metatheoretical assumptions inherent in a social practice and constructionist epistemology have critical consequences for the ways in which decisions are made about which data are collected, how they are analysed, and how the findings can be interpreted. Key to these methodological decisions is the ontological status of the key constructs under study, such as the different conceptions of teachers' knowledge. If we go back to the quote from Freeman in section 4.4.1, we can see that he grants PCK two possible ontological statuses. It can be some kind of pre-existing knowledge on which engagement in classroom practices is based. Or, it can be knowledge 'which that engagement expresses in practice' (2002: 6). With the second option, Freeman opens up the possibility that knowledge, rather than being the underlying or 'hidden' cause of whatever ways teachers and students engage with content, may be found in those very practices. This study overall takes the second option by adopting a 'social practice' perspective on the phenomena it investigates - CLIL teachers' language awareness as part of their practical knowledge for teaching. In this perspective, there is no assumption that the 'outer' world of behaviours and actions is somehow controlled by an 'inner' world of cognitions such as knowledge and belief. Knowledge is not some pre-existing mental entity which swings into action every time we engage in a practice. Rather, knowledge is manifested in and through practice itself.

A social practices approach does not separate the inside and the outside, but sees the achievement of practical outcomes as mediated and prefigured by 'arrangements of sayings, doings, set-ups and relationships' (Kemmis 2009: 32). In a practice perspective, knowledge, or understanding, is seen not as belonging to some mental

realm forever out of sight, but as bound up in the flow of human activity. As Schatzki (2001: 2) defines them, practices are ' embodied, materially mediated arrays of human activity centrally organized around shared practical understanding'. In this view, then, there is no need to separate 'cognitive' phenomena such as 'knowledge' or 'understanding' from other practical actions. The accounts and descriptions of practice that people produce are essentially part of that same practice. As Bourdieu points out, the 'knowledges' produced in practitioners' representations or explanations of practice are 'the product of the same generative schemes as the practices they claim to account for' (Bourdieu 1977: 20). Thus, in this thesis, CLIL teachers' language awareness (TLA-CLIL) as an aspect of their PCK is theorized as an essential component of the shared practical understanding which contributes to the organization of the embodied, materially mediated activity of teaching content through a foreign language.

Related to this social practice perspective, the study also adopts a social constructionist approach. Potter (1996: 97-98) provides a useful description of social construction by comparing two metaphors: the mirror and the construction yard. In the mirror metaphor, language is seen as reflecting how things are in the world. People's descriptions and accounts of reality can be more or less reliable, but the assumption is that there are things out there in the world which can be pretty unproblematically reflected in language. In the 'construction yard' metaphor, people's descriptions and accounts are seen as constructing versions of the world. Facts are not just 'out there', but people can work up descriptions and accounts to make them 'facts'. Also, descriptions and accounts are themselves constructed, assembled from sets of different materials and resources, such as words, expressions, metaphors, rhetorical flourishes etc. The social constructionist approach is entirely compatible with, and indeed shares Wittgensteinian roots with, the social practice perspective (Potter 1996; Schatzki 1996). It is critical of a cognitivist view of language which, as Potter puts it, 'loses sight of the way language is oriented to activities: it obscures its *practical* nature.' (Potter 1996: 72. Italics in original). Thus, rather than using language to gain access to a hidden mental realm, or to ascertain the reliability or truth of participants' descriptions or accounts, a social constructionist perspective focuses on

> (…) a world of descriptions, claims, reports, allegations and assertions as parts of human practices, and it works to keep these as the central topic of research

> rather than trying to move beyond them to the objects or events that seem to be the topic of such discourse.
>
> (Potter and Hepburn 2008: 275)

In this study, then, the teachers' descriptions, claims and reports relating to their practices as elicited in the different verbal commentaries, are themselves a topic of research, and not simply a window onto their pre-existing cognitions. The theoretical shift in the study is to take a step further what both Loughran, Mulhall and Berry (2004) and Hashweh (2005) were already starting to do by moving PCK out of the realm of individual cognition and seeing it as a construction. In doing so, the study aims to circumvent some of the theoretical and methodological problems which have beset teacher cognition research in general.

5.6.2 Methodological implications of a social practices approach to teacher cognition

This study fully endorses the view expressed by Phipps and Borg (2009) that it is only through the use of qualitative methods that we can gain adequate understanding of the relationships between teachers' cognitions and their practices. As they put it,

> (…) studies which employ qualitative strategies to explore language teachers' actual practices and beliefs will be more productive (than, for example, questionnaires about what teachers do and believe) in advancing our understanding of the complex relationships between these phenomena.
>
> (Phipps and Borg 2009: 388)

However, while the study clearly uses qualitative strategies, the metatheoretical assumptions underlying its social practices approach mean that it needs to adapt and use differently some of the qualitative methods used in teacher cognition research. There are two main implications of using a social practices theoretical underpinning for the study. First, it will not be appropriate to describe teachers' knowledge and beliefs relating to the roles of language in their teaching as inner, mental processes that impact on their practices. Second, it cannot be naïvely assumed that teachers' verbal commentaries can be a transparent window onto such cognitions. In fact, as I will argue here, taking such a

social practices approach neatly circumvents some problematic issues that have affected teacher cognition research.

5.6.3 Four problematic methodological issues in teacher cognition research

In this section I describe four main problems that can affect teacher cognition research, any of which, if not addressed by researchers, can threaten the validity of individual studies. These are:

- The fact that 'cognitions' revealed in studies may be a product of the data elicitation methods used;
- The often misleading distinction between cognitions claimed to be professed by teachers and those ascribed to them by researchers;
- The fact that researchers and teachers may mean different things when they talk about concepts relevant to the teachers' practices;
- The lack of attention to the co-constructed nature of the interaction in verbal commentary data such as qualitative interviews.

In the rest of this section, I will discuss each in turn, before showing how an approach informed by conversation analysis and discursive psychology may offer a solution.

Qualitative research on teacher cognition uses a range of data elicitation methods, each of which implies underlying assumptions about the nature of the cognitions being investigated. For example, as Borg (2006) points out, interviews reflect the assumption that cognitions such as beliefs can be articulated by teachers and that they can provide accounts of the cognitive processes that underpin what they do in the classroom. Beyond this, there is the assumption that teachers' accounts of practice are a pathway to some other underlying reality (i.e. their 'mental' lives), and that this can somehow be 'read off' the verbal data. For example, in a recent study of a language teacher's practical knowledge, the author claims that 'interviews allowed access to her thoughts, feelings and beliefs' (Wyatt 2009: 20). Whatever the data elicitation method used, then, there is a need for a high level of researcher reflexivity. We need to be aware of the

possibility that, as Borg warns, 'the nature of the cognitions which are obtained is a product of the elicitational methods used' (2006: 279).

The second problematic issue in teacher cognition research is that of the perceived inconsistency between 'professed' and 'attributed' beliefs (Speer 2005). This tended in the past to be put down to teachers' inconsistency because the beliefs they said they had (their professed beliefs) did not match the beliefs that could be inferred from what they actually did in the classroom (their attributed beliefs). However, as Borg (2006) points out, rather than seeing teachers as being inconsistent, we can put down variation in their responses to sources beyond individual inconsistency, such as the contextual constraints on their practices or their reactions to different data collection methods. Thus, as Speer (2005) shows, this problem can be related to the first problem discussed here, that of the relationship between the data elicitation methods and the cognitions revealed. She argues that it is inappropriate to describe aspects of teacher cognition such as beliefs as 'professed' by teachers, given that such attributions are filtered through researchers' data collection methods, theories, data analyses, and presentation of findings.

Speer (2005) also identifies the third major problem in teacher cognition research: that of the lack of shared understanding between researchers and teachers. This in fact can contribute to the second problem, as researchers may wrongly attribute supposed inconsistencies between teachers' beliefs and actions based on misunderstanding about the meaning of terms used to describe the teachers' practices. Speer gives the example of 'group work', which can mean many different things in different contexts. As was discussed in chapter four, this problem is also identified by Woods and Çakir (2011), who point out that the same concepts can be labelled differently, or different concepts can have the same label in teacher cognition research. This can be seen as part of a wider problem in qualitative research in the social sciences, where researchers can 'flood' interviews with terms and categories which belong to their theoretical preoccupations, and not to the participants' worlds of practice (Potter and Hepburn 2005).

The fourth problem can be said to be more fundamental, in that it underlies all the others. It is the failure to recognise the co-constructed nature of discourse and interaction in the elicitation of cognitions through teachers' verbal commentaries. This

is a crucial issue, as most of the elicitational methods used for investigating teacher cognition are discourse-based, as can be seen from the chapter headings on research methods in Borg's (2006) volume on language teacher cognition (self-report instruments, verbal commentaries, reflective writing). Even the least discursive elicitational method, observation, is based on linguistic constructions, such as checklists, schedules, field notes or coding schemes. However, in most reports of teacher cognition studies, there is little recognition that the cognitions obtained were the product of co-constructed social interaction, for example in qualitative interviews.

Indeed, this problem is prevalent throughout qualitative applied linguistics research, as is shown in Mann's (2011) discussion of four 'discourse dilemmas' in qualitative interviewing. These are: the co-constructed nature of interview talk; the need for a greater focus on the interviewer; the need to represent the interactional context; the need for a focus not just on the 'what', but also on the 'how' - showing the interactional processes through which phenomena of interest were produced. In short, Mann is arguing that qualitative researchers who use interviews need to provide information not just on the 'what' - the substantive issues under investigation, but this needs to be accompanied with more detailed information on the 'how', in the form of transcripts and analyses which show how the interviews were jointly accomplished by participants, with the interviewer playing a key role. There also needs to be more information on the context, both in terms of the conditions under which interviews (or any other data elicitation procedure) were carried out, and the interactional context - that is, how the talk is produced turn-by-turn in sequences.

Mann's (2011) work applies to applied linguistics methodological concerns about the use of qualitative interviewing which have been voiced in the wider social sciences literature. In an important paper, Potter and Hepburn (2005) distinguish between 'contingent' and 'necessary' problems in using qualitative interviewing in social research. Contingent problems can be dealt with by making some methodological adjustments, while necessary problems threaten the very validity of qualitative interviews as a method for investigating social practices. The contingent problems are:

1. the deletion of the interviewer;
2. the conventions of representation of interaction;

3. the specificity of observations;
4. the unavailability of the interview set-up;
5. the failure to consider interviews as interaction.

(Potter and Hepburn 2005: 285)

These issues broadly mirror the 'discourse dilemmas' identified by Mann, with points three and four worthy of some additional comment. The third problem relates to the practice of making claims about, for example, cognitive phenomena such as beliefs based on discourse data without specifying exactly where and how in the data such an assertion can be justified. The fourth problem has two dimensions. First, there is the issue of the category under which the participants have been recruited. Potter and Hepburn give the examples of people being recruited for research being categorized in such roles as 'lesbian mother', 'adolescent male', or 'recreational drug user' (p. 290). Recruiting someone for an interview as a 'teacher' is likely to have significant consequences for how interview interaction turns out, as they may orient to behaviours and opinions that may be expected from a member of this professional category. The other dimension of the 'unavailabilty of the set up' problem refers to what task understandings are presented to participants. This usually occurs right at the beginning of interviews, or just before the recording device is switched on, with the result that this important aspect of the interview set up is lost. How were the participants informed about the goals of the interview? How was the interview task set up at the beginning? This type of information may be crucial for an understanding of how the interview actually unfolded as an interactional event.

The 'necessary' problems, which threaten the very validity of qualitative interviewing as a research method are:

1. The flooding of the interview with social science agendas and categories;
2. The complex and varying footing positions of interviewer and interviewee;
3. The possible stake and interest of interviewer and interviewee;
4. A drag toward cognitive and individual explanations.

(Potter and Hepburn 2005: 291)

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As briefly discussed above, the first necessary problem relates to the use in interviews of a specialized terminology which may derive from the theoretical concerns of the researcher, but which do not represent the way the participants would describe their reality. Even when no technical terminology is used, this problem can be seen in the way researchers refer to topics in abstract terms, rather than the specifics of actual teachers, schools and learners.

The second necessary problem relates to the ways in which interviewees may be positioned as speaking as representatives of some category, such as teachers, or themselves. 'Footing' is the term used by Goffman (1981) to describe the different ways a speaker can be positioned in relation to what he or she says. A speaker may simply an 'animator' or kind of mouthpiece for what is being said, without having chosen either the ideas or form of words. Or he or she can be the 'author' of the words, without necessarily being responsible for the content of what is being said. At the highest level of commitment, a speaker may be a 'principal' in the sense that he or she is responsibe for the ideas being expressed. As discussed above, people may be recruited for social science research as members of some category, such as teachers. Within the research interview as an interactional event, their ascribed membership of categories can be seen in the ways that they are addressed.

The third 'necessary' problem refers to ways in which participants in social interaction are not just neutral commentators on their own practices. All descriptions of actions, people, events or other phenomena can be read either explicitly or implicitly as displaying the speaker's stake or interest. An interviewee, for example, may build a picture of his or her actions to make available a certain interpretation of these actions as justified, reasonable, etc. and to ward off any other interpretations that may be seen as unfavourable to his or her interests. The fourth necessary problem has two facets: conceptual rumination is privileged over action and cognitive language is treated as descriptive. The focus on conceptual rumination means that participants are positioned as commentators on what they think and do, rather than as practitioners taking part in some relevant activity. The assumption is, as Potter and Hepburn put it, that 'You ask people about what they do and think and they helpfully tell you about it' (2005: 298). Treating cognitive language as descriptive can mean falling into the trap of assuming that when participants talk about what someone thinks, wants, knows etc., they are

actually describing a pre-existing mental phenomenon, rather than using these categories as part of what their descriptions of reality are meant to do, for example attributing intention to someone as part of justifying one's own response to their actions.

The overall point being made by Potter and Hepburn, and to a large extent by Mann, is that social researchers need to be more reflexive in their use of qualitative interviewing as a research method. Indeed, if we look at the 'necessary' problems, there may be strong grounds for not using interviews at all, and for preferring more naturally-occuring types of interaction. At the very least, however, researchers who choose to use interviews and other similar forms of verbal commentary need to address the 'discourse dilemmas' or contingent problems. Generally, teacher cognition studies do not address these discourse dilemmas or contingent problems, let alone the necessary ones. The consequences of this are often an exacerbation of any one or more of the first three problems identified at the beginning of this section. For example, research reports often present blocks of participant talk pulled out of the data in order to illustrate cognitions such as 'knowledge' and 'beliefs'. No information on the situational or interactional context may be given. For example, Hashweh (2005: 286) cites a piece of data which he claims shows that the teacher 'subscribed to what might be called a cognitive view of learning':

> I like to do what's called an overview. And I like to show them how this particular subject that we're dealing with ties into stuff that they already know, how it fits into stuff that they've learned about … I help them fit it into their intellectual framework if possible.

Apart from the fact that the interviewer's turn has been effaced so that we can't see how this piece of interaction was co-constructed, there is a lack of specificity of observation. That is, we do not know exactly which part of the teachers' turn shows that he has a 'cognitive view of learning'. Usually, as is the case here, the interviewer is invisible (Potter and Hepburn 2005), airbrushed out of the presented data with the result that his/her contribution to how the teachers' 'cognitions' were produced is lost. Sometimes researchers do mention interactional features, but, as Mann (2011) shows in his

discussion of Borg (2009), this may be just a mention, with no reproduction of transcribed data which would show these features in action.

The identification of these problems does not involve the invalidation of the valuable and necessary qualitative research on teacher cognition carried out over the last thirty years or so. What it does do is to add to Borg's (2006) and Woods and Çakir's (2011) calls for a clearer definition of concepts and terms, a call for greater reflexivity and transparency in recognizing the reflexive relationship between the (discourse) data produced by different elicitational methods, and the 'cognitions' produced. Most teacher cognition studies use discourse data as a *resource*, that is, as a means of gaining access to the other phenomena the researcher is interested in, such as knowledge, beliefs, attitudes etc. An alternative is to see the discourse data as a *topic* in themselves, something that is worthy of study partly for its own sake, and partly for what it can tell us about *how* the other phenomena of interest to the study were produced in interaction. In fact, not doing this, or in Mann's (2011) terms, not addressing the 'discourse dilemmas', means that any teacher cognition study may be vulnerable to one or more of the four problems described in this section.

5.6.4 Addressing the methodological issues: videoclip comments and analysing verbal commentaries as social interaction

This study addresses the methodological issues identified in the previous section in two main ways, the first relating to a specific method of data-elicitation, and the second relating to the study's overall approach to the status and analyses of the discourse data elicited in verbal commentaries. As regards the first, it uses a videoclip-based comment procedure (Speer 2005) to ensure that, as far as possible, the researcher and teachers establish mutual understanding on what aspects of the teachers' practice are being focused on. Second, it draws on theoretical and methodological tools developed in discursive psychology and conversation analysis in analysing the discourse of teachers' verbal commentaries as a topic in itself, not just a resource for accessing 'mental' phenomena or comparing it with 'reality' (as in classroom practice). Each of these two ways of dealing with methodological issues is addressed in turn below.

Apart from the issues of mutual understanding, the use of video recording already has an important justification in the study. Many studies in teacher cognition rely solely on teachers' verbal reports on their classroom practices, without providing any evidence regarding the practices themselves. This is being seen as increasingly problematic in teacher cognition research, with Borg (2006) arguing that 'the study of what teachers *do* should be integral to the study of (...) teacher cognition' (p. 273, italic added). Even when verbal commentary data such as semi-structured interviews are used alongside observation of practice, the two data-sources are often kept separate, with often one data-source being used to 'undercut' (Silverman 2001) the other, for example by pointing out supposed 'inconsistencies' between what teachers do and what they say. This study addresses both these problems, by, in the first place, not relying solely on teachers' verbal commentaries, and by integrating the two types of evidence by adopting a social practices approach to all the interactional settings in the study - classrooms and other data elicitation contexts.

To address the problem of establishing mutual understanding, Speer (2005) suggests that a methodological remedy for this situation is to ask teachers to comment on videoclips of their own practices, in what she calls the 'videoclip interview technique'. She claims that this method can 'enable researchers to collect data on beliefs tied to specific examples of teachers' practices and data is generated that permits more accurate attributions of beliefs' (2005: 377). By getting teachers to comment on very specific examples of their practices, rather than decontextualized abstractions or generalizations, this technique can get round the 'conceptual rumination' problem described above. By watching videoclips of classroom action together, researcher and teachers can achieve more shared epsitemic primacy (Stivers, Steensig and Mondada 2011) and will be able to focus in on more concrete examples of practice.

The second methdological issue, that of the way in which 'discourse dilemmas' are dealt with, is more fundamental to the study than the choice of any one data elicitation strategy. In addressing these issues, the study draws on the theoretical and methodological frameworks of discursive psychology and conversation analysis. However, it is important to point out at the outset that the study does not position itself as either a discursive psychological or conversation analytic piece of research. That is, its main focus is neither an analysis of the discursive resources used by the teachers in

building their worlds of practice, nor a micro-analysis of the ways in which the classrooms or the other interactional settings were jointly accomplished. Rather, in drawing on selected analytic tools from both perspectives, the study takes steps to address the 'discourse dilemmas' and contingent problems discussed in the previous section. In broad terms, the methodological approach is to achieve a balance between the 'what' and the 'how'. In avoiding the contingent, and indeed some of the necessary, problems of using verbal commentaries, there is a danger of going too far, with the 'hows' of joint construction of knowledge taking precedence over the substantive issues the research is supposed to be about. The approach taken is consistent with Holstein and Gubrium's (2004) concept of the 'active interview' in which there is a balance between a focus on the meaning-making process and the actual experiences of the interviewees. As they put it, 'The analytic objective is not merely to describe the situated production of talk, but to show how what is being said relates to the experiences and lives being studied in the circumstances at hand.' (Holstein and Gubrium 2004: 156). Put another way, the study's methodological approach is to be reflexively aware of, and to take steps to resolve, what Mazeland and ten Have (1996) describe as three 'essential tensions' in research interviews:

- Description of the lifeworld of the speaker
- Local relevance (answers to questions)
- Materials for analysis relevant to research topic

(Mazeland and ten Have 1996)

Thus, there is a clear interest in the 'lifeworlds' of the teachers, that is what they do in their classrooms, and the ways in which language figures as an aspect of these practices in their own terms. However, 'local relevance' is also a focus of the study, in that their descriptions of their practices emerge in the context of interaction, as responses to a question, or a request to comment on a videoclip. Here, it is important to recognise the importance of the discursive organization of research interviews as interaction. The interviews in this study were designed to have a 'mixed format' - a combination of what Mazeland and ten Have (1996) and ten Have (2004) describe as 'turn-by-turn' (TBT) and 'discourse unit' (DU) interviews. TBT interviews mainly consist of short turns, such as questions, answers and acknowledgement tokens (ten Have 2004: 62), while DU interviews position the interviewee as the expert on his/her own experiences with

the questions put by the interviewer marking out an 'answering space' which indicates the general character of the response expected (ten Have 2004: 64). Thus, at some phases in the interview, the interviewee was the 'primary speaker' with the interviewer limiting himself to minimal responses. At other stages, there were exchanges of shorter turns in TBT format, often as part of the 'work' of preparing the ground for a DU phase of the interview. There is also a focus on maintaining a dialogue between the evidence as produced in the classroom and interview data, and the theoretical ideas about the roles of language in CLIL, and about teachers' knowledge, which frame the study. Having set out the broad methodological approach, we can now turn to a more specific description of the tools from discursive psychology and conversation analysis which were employed in the analysis of discourse data in the study.

5.6.5 Using tools from discursive psychology and conversation analysis

Discursive psychology (DP) is an approach to the study of discourse in which all types of cognitive phenomena are seen as an intrinsic part of the interactional business participants are involved in, rather than as invisible inner states somehow controlling their actions. It has a constructionist epistemology, in that its focus is not on the existence or otherwise of mental states or the veracity of events in the world, but on the discourse through which participants construct versions of reality in their descriptions of events (Potter 1996; Potter and Hepburn 2008). Psychological phenomena such as beliefs, knowledge, attitudes or opinions can be explicitly referred to in discourse as part of participants' business, or versions of events can be constructed in certain ways to make available 'psychological' attributions such as intentionality. In avoiding the cognitivism of mainstream psychology, DP is a radical departure, constituting, as Wooffitt (2005) puts it, 'nothing less than a thorough reworking of the subject matter of psychology' (p. 112). Its radical move is to treat psychological matters not as located in people's heads, but in the situated, action-oriented and constructed nature of discourse. Its programme can be broadly characterized in terms of the following three core principles (based on Hepburn and Wiggins 2007: 7):

1. Action orientation. Discourse is seen as a primary means through which social actions are done, and actions are seen as embedded in wider practices. DP has a

particular focus on how actions like complaining or attributing motives are done indirectly through descriptions of events, people and things.

2. Situation. DP sees discourse as situated in three ways. First, discourse is organized sequentially in the ways described by conversation analysis. Social actions such as invitations or accusations are built as sequences, with one action making a second one relevant (acceptance, declination, admittance, denial) in (usually) the next turn. Second, discourse is situated institutionally. That is, institutional activities and identities (teacher-student, doctor-patient, journalist-politician) will be of relevance to how the discourse unfolds. Third, discourse is situated rhetorically. That is, any version of events can be built up as an alternative to, or even to undermine, some other version.
3. Construction. For DP, discourse is both constructed and constructive. Discourse itself is constructed out of a range of symbolic resources (words, labels, categories, metaphors, interpretative repertoires), but is is also constructive in that descriptions, reports, accounts etc, are used to construct different versions of reality. For example, speakers can use a range of resources to construct descriptions as factual, and then use this 'factual' nature to carry out an action such as justifying their actions or attributing blame.

Such a radical reworking of cognitivist assumptions can have profound implications for teacher cognition research, and can offer ways of moving the field beyond some of the problems described in the previous section. The first important shift is to see talk produced by teachers either through data elicitation processes or in the classroom as action-oriented. That is, rather than seeing their talk as a window onto the underlying cognitions that somehow guide, influence or even cause their behaviour, we analyse the actions they are doing with that talk as it is produced. Second, we treat all the teachers' talk as situated in the three ways described above. In interviews, or in the classroom, the talk will consist of interactional sequences, questions-answers, assessments-agreements/disagreements etc. The institutional situation and identities may also be relevant (researcher-teacher; teacher-students) and oriented to in the talk. In talking about their practices, teachers will not be disinterested observers, but will build descriptions of their practices with an eye to alternative versions which could have consequences for their accountability as professionals. Third, rather than mining interviews or other elicited data for themes or 'cognitions', the analytic focus will be on

the resources teachers use in constructing both their practices and their descriptions of practice, and on the kinds of social actions these descriptions are designed to perform. The analytic goal will be to see how a teacher constructs her world of practice both *in* practice and in her talk *about* practice.

In analysing talk as situated action, discursive psychology draws on the analytic resources of conversation analysis (CA). According to Sidnell (2010:1), CA is 'an approach within the social sciences that aims to describe, analyse and understand talk as a basic and constitutive feature of human social life'. CA uses fine-grained transcripts of audio and video-recorded interaction, in which no detail, however small, is discounted as potentially relevant to the analysis. Rather than impose external theoretical models or frameworks on the data, the objective is to explicate participants' practices from their own (emic) perspective. CA studies focus on one or more of what Schegloff (2007: xiv) describes as six main 'problems' that speakers face in talk-in-interaction. These are, briefly, how turns are distributed among speakers, how speakers design turns at talk to be recognizable as actions such as requesting, inviting etc., how talk is organized in sequences, how 'troubles' in mutual understanding are repaired, how turns are 'designed' in terms of their components, and how longer stretches of interaction are structured. Although CA takes as its baseline members' practices in producing ordinary conversation, it has been used to study interaction in a wide range of institutional contexts, such as courtrooms, doctor-patient consultations, and media interviews (Drew and Heritage 1992; Heritage and Clayman 2010). The growing shift in CA away from studies of mundane conversation towards institutional contexts has led to the more frequent use of 'talk-in-interaction' as opposed to 'conversation' as its object of study (Hutchby and Wooffitt 2008).

The purposes of using a CA-informed approach to analysing interaction in this study are twofold. First, in order to answer research questions one and two, it is necessary to achieve an overall characterization of the relationships between pedagogical goals and interactional organization in the four classrooms in the study. Second, in order to deliver on the methodological and analytic goal of describing the verbal commentaries produced in the study as situated social action, and deal with the 'discourse dilemmas', it is necessary to provide a more fine-grained analysis of transcripts than is the norm in other teacher cognition studies. I expand on both these purposes in what follows.

The first research question asks what is the relationship between the interactional organization of the CLIL classrooms in the study and the teachers' pedagogical purposes, in other words, how the teachers use the L2 as a tool for achieving their curricular goals. In order to answer this question, it is necessary to have at least a broad description of the kinds of interactional contexts which are found in these classrooms. For this, the study uses the concept of classroom micro-context, as developed by Seedhouse (2004), in his work on L2 classroom interaction. Seedhouse uses a CA methodology to describe how the interaction in L2 classroom changes in accordance with teachers' pedagogical focus. He identifies three types of evidence of a teacher's pedagogical focus:

1. The teacher states explicitly what the pedagogical focus is.
2. Ethnographic evidence is used (pre-teaching interview, lesson plan, post-teaching reflective comments)
3. Classroom-interaction internal evidence is used. That is, the participants' own orientations to a pedagogical agenda in the unfolding interaction.

(Seedhouse 2004: 195-97)

In the first type of evidence, we can look in the data for teachers' explicit statements of what the pedagogical focus is. In some contexts, it is a relatively common practice for teachers to explain to learners what the goal of an activity is, explicitly stating what they are looking for as successful completion of the activity or what constitutes a correct response etc. The second type of evidence involves looking beyond the classroom interaction by asking teachers to produce some kind of verbal commentary, as in most teacher cognition studies, or by using documentary evidence such as lesson plans, teaching materials or examples of students' work. The third type of evidence corresponds to Seedhouse's own approach, in which he uses a CA methodology to examine the relationship between classroom interaction and pedagogy from within the interaction itself. He describes the analyic procedure as one in which

> The analyst follows exactly the same procedure as the participants and traces the evolving relationship between pedagogy and interaction, using as evidence the analysis of this relationship which the participants display to each other in their own turns. (Seedhouse 2004: 195)

In this study, type 3 evidence is the first evidence used in tracing the relationships between the interaction and the teachers' pedagogical purposes. In doing so, as with Seedhouse's work, the result is a description of a small set of 'micro-contexts' each corresponding to a broad alignment of interactional organization and pedagogic foci. Seedhouse showed how these classroom contexts could provide both a context-specific and context-free description of examples of classroom interaction. That is, they allowed the analyst to show how pedagogic goals and interaction were aligned in any specific example of classroom data, at the same time as showing how any particular example of classroom data also belonged to one of a small set of classroom micro-contexts, that could be found throughout the wider corpus. Seedhouse's micro-contexts of course were relevant to the interactional context he was investigating, EFL classrooms. Thus, his four micro-contexts relate to broad purposes in foreign language teaching, such as focusing on form and accuracy, meaning and fluency, or task-orientation, as well as a more general procedural context. For this study, the approach is adapted to CLIL classrooms, which although they are still L2 classrooms, are essentially subject classrooms, with different sets of pedagogic foci and agendas. However, the same analytic procedure is used, and the result, as will be seen in chapter six, is a broad characterization of five classroom micro-contexts which cut across the four different subjects taught.

The study also uses CA resources to explicate in more detail how the teachers dealt with language in the classroom, in what are described as 'language-focused practices' (LFPs). The two main analytic resources used for these analyses relate to two of the 'problems' referred to by Schegloff (2007) above: the sequence organization of talk, and repair of 'troubles' in talk. In analysing how turns at talk link together to form coherent sequences in conversation, the major resource for analysis of is that of 'adjacency pair' (Schegloff 2007). Adjacency pairs are linked pairs of utterances produced by different speakers, in which the 'first pair part' such as an offer, sets up an expectation, or 'conditional relevance' for a second pair part (an acceptance or declination). Another important concept is preference organization. This refers to the observation that some adjacency pairs have 'preferred' and 'dispreferred' second pair parts. For example, the preferred second pair part for an offer is an acceptance, while a rejection is dispreferred. It is important to bear in mind that 'preference organization' is

an interactional phenomenon and as such is not concerned with speakers' psychological states, such as actually preferring one option over another. This is seen in the fact that preferred or dispreferred responses can be signalled by interactional phenomena, such as hesitations, pauses or the use of discourse markers to delay dispreferred second pair parts.

The second major analytic resource used to explicate the teachers' language-focused practices is that of repair. In describing the interactional organization of repair, Schegloff, Jefferson and Sacks (1977) distnguished between the two actions of initiating or carrying out a repair, and the actors involved in these actions. Repairs could either be initiated by the current speaker, as when he or she indicates having some trouble in producing an item, or by another speaker who points out some trouble in hearing or understanding or in the correctness of what a first speaker has said. Repair can be carried out by the same speaker, who may, after indicating there was a problem, act to resolve it by filling the gap or correcting a previous utterance, or by another speaker, who supplies the missing information or corrects the troublesome aspect of the first speaker's utterance. Schegloff *et al*. (1977) identified a preference organization for repair trajectories, with self initiation and repair preferred over other initiation and repair. Jefferson (1987) also noted the practice of embedded correction, in which a second speaker reformulates some aspect of a previous speakers' utterance without explicitly drawing attention to any repair having been carried out. This practice has been noted in classrooms in the literature on recasts, where it could be placed at the 'implicit' end of an explicit/implicit continuum for recasts (Sheen 2006). The CA framework of repair has been used in studies of L1 classroom interaction by researchers such as McHoul (1990) and Macbeth (2004), and by van Lier (1988) and Seedhouse (1997; 2004) in L2 classrooms. In this study, the CA resources for repair are used in the analysis of the teachers' reactive LFPs, that is, how they respond to aspects of L2 use in their learners' utterances.

In sum, then, CA analytic resources are used to provide an overall description of the interactional properties of the micro-contexts which emerge in the classrooms in the study, and how these relate to the teachers' pedagogical goals, as well as more detailed analyses of the teachers' language-focused practices (LFPs). However, because this is a teacher cognition study, it has a legitimate interest in one of the other types of evidence

mentioned by Seedhouse (2004), namely type 2. In fact, the majority of the data used in the study, as is fitting in such an approach, are verbal commentaries elicited from the four teachers before and after teaching the video-recorded lessons. Thus, as described in the previous chapter, the CoRe instrument is used as the basis of pre-teaching interviews, and, as discussed above, videoclip vignettes are presented to the teachers for post-teaching reflective comment. However, because of the study's social practice orientation and borrowing of key ideas from discursive psychology, the approach to the analysis of these data is rather different from that of other teacher cognition studies. As described above, the interaction in the settings in which the verbal commentaries are produced is itself a topic in the study, as it is seen as action-oriented, situated and (co) constructed.

This brings us to the second reason for using a conversation analysis methodology: in order to represent the action-oriented, situated and co-constructed nature of the data, and thus address the 'discourse dilemmas', it is necessary to have detailed transcripts which can show how the teachers' verbal commentaries were actually produced (transcription conventions are given as appendix A). More conventional treatments of data in teacher cognition studies fail to do this, leaving out interactional information such as repairs, repetitions, pauses, overlaps or adjacency pairs, which may have a crucial impact on how any 'cognition' was jointly produced. Thus, the object of using CA is not to provide a detailed analysis of the interaction for its own sake, but to show how the phenomena of interest to this study, ways in which language figures in the teachers' practices and understandings, are, at least partly, the product of the interactional contexts in which they were co-constructed.

Using a CA-informed methodology allows the analyst to build a bridge between different data sets. Unlike some teacher cognition studies which seek to expose inconsistencies between teachers' professed and attributed beliefs, a CA approach as part of a social practices perspective sees discourse in *all* interactional settings as action-oriented, situated and co-constructed. When teachers use cognitive categories such as 'belief' or 'knowledge' or construct descriptions in ways that make available interpretations of participants' intentions or epistemic states, they do so for the purposes of the interaction they are involved in *at that moment*. This goes for whether they are in the classroom or participating in a pre-teaching interview or post-teaching reflective

comments. It will be analytically legitimate to identify courses of action, uses of interpretative resources (such as images, metaphors, phrases), and 'cognitive' attributions, all of which may appear in different contexts, but with variation in the ways in which they are used. Thus, a CLIL science teacher may talk about students' 'misconceptions' in a pre-teaching interview, use a classroom interactive practice which orients to the discovery and exposure of 'misconceptions', and, in post-teaching reflection, provide accounts of her practice in which 'misconceptions' are used as a justification for certain courses of action. None of this relies on any assumption that the teacher 'possessed' beliefs about 'misconceptions' and that these 'made' her act in certain ways. Much less does it rest on any assumption of 'inconsistencies' between professed and attributed 'beliefs'.

In sum, the methodological approach taken in the study, as seen in its selective use of concepts from discursive psychology and conversation analysis, is entirely consistent with its social practices metatheoretical stance. It will be recalled from the beginning of this section that the view on knowledge and understanding taken in the study sees both as intrinsic parts of human social practices, not as some 'ghost in the machine' which directs action. The focus is on the 'shared practical understanding' around which embodied activity is organized. In this sense, the CLIL teachers' language awareness is a matter of the shared practical understandings which are inherent in embodied activities, whether they are in the classroom or any other interactional setting. Discursive psychology provides a framework for describing how 'cognitive' matters emerge in embodied activity, while conversation analysis provides practical methodological tools to describe the 'arrangements of sayings, doings, set-ups and relationships' (Kemmis 2009: 32) in the interactional settings in the study.

5.7 Chapter summary and conclusion

This chapter has dealt with the methodological aspects of the study. It began by setting out the research questions which drove the study forward, and went on the describe the participants in the study and the data gathering methods. The study's use of a multicase study strategy was explained and justified, and ethical issues were addressed. This was followed by a discussion of the study's overall methodological approach, which was seen as arising from its fundamental social practices and constructionist epistemology.

Four methodological problems that can beset teacher cognition research were described: the reflexive relationship between data elicitation methods and 'cognitions' obtained; the often misleading distinction between professed and attributed cognitions; the lack of shared understanding between researchers and teachers; the lack of attention to the con-constructed nature of verbal commentary data. The methodological approach taken in the study, one based on an overall social practices metatheoretical perspective, and drawing on the analytic resources of discursive psychology and conversation analysis, was presented as a way of ameliorating the effects of these problems. Now that the theoretical frameworks underpinning the study have been established, the research questions set out, and the approach to addressing them described, it is time to turn to the results of the study, which are presented in chapters six, seven and eight.

Chapter 6. Language as a tool for teaching and learning in the teachers' knowledge, thinking and practices

6.1 Introduction

This, the first findings chapter, addresses the first two research questions of the study, which focus on how the teachers use language in interaction in the classroom to accomplish pedagogical goals. These questions are:

1. What are the relationships between the teachers' pedagogical goals and the organization of interaction in their classrooms?
2. How do the teachers construct the relationships between interactional organization and their pedagogic purposes in postactive reflective comments?

In addressing these questions, the analysis in the chapter draws on two main data sources: the transcripts of classroom interaction, and the teachers' comments on video vignettes of their own classrooms. Using the classroom interactional evidence, the corpus was divided into five 'micro-contexts', or speech exchange systems which were in a reflexive relationship with a set of broad pedagogic goals. As was argued in chapter three, classroom interaction cannot be described as one homogenous context, but rather consists in a variable and dynamic shifting between 'micro-contexts', which in turn, reflect a teacher's shifting pedagogic goals. For example, the teacher may be working directly with the learners in whole-class interaction on some aspect of conceptual understanding, or she may be giving instructions to ensure the smooth running and successful outcome of an activity. Examination of the corpus of CLIL lessons led to the identification of five micro-contexts which were in a reflexive relationship with different pedagogic goals. These were:

- direct instruction, in which the teacher interacted with the whole class to work on an aspect of content knowledge or skills;

- task-setting, in which the teacher set up some activity that the students were to do either individually or in groups;
- task-centred activity, in whch students worked, often in small groups, on some task that had been set by the teacher;
- task-checking and feedback, in which the teacher went over with the whole class the results of the task set, giving feedback and further exploring ideas that came up;
- orienting learning, in which the teacher directed students' attention to the organization of the lesson, unit or curriculum itself, and its goals.

As in other approaches to variation in classroom interaction (e.g. Seedhouse 2004 or Walsh 2006), there is no claim that the five micro-contexts are exhaustive, or that others might not be identified. However, at any point in the classroom interaction in the corpus of 12 lessons, it was possible to identify, from the interactional data, that one of these five micro-contexts was in operation, as an emic matter, in that participants could be seen to orient to them in their turn design, and in the overall sequential organization. The micro-contexts which emerged out of the analysis of interaction in the four classrooms have some overlap with other characterizations of different phases of classroom discourse. For example, Gibbons (2006) identifies five stages in teaching and learning activities in mainstream classrooms with ESL learners. These are review and orientation, setting up of new task, carrying out a task, reflection on task and written work. Hajer (2000), also working in the context of mainstream education in which there is a high number of pupils learning the language of instruction, describes three lesson 'segments': explanation, seatwork, and going over seatwork, and shows how effective teachers capitalized on the characteristics of each context to promote meaningful interaction.

In order to generate teachers' accounts of practice, examples of interaction in these micro-contexts were presented to the teachers in the form of video vignettes and their comments elicited. As Seedhouse (2004) points out, information about what he describes as 'teachers' concerns' can be obtained in other ways, apart from the interactional evidence. Artifacts such as teaching materials and lesson plans can be used to provide evidence about teachers' pedagogic agendas, and verbal reports can be elicited from them about their thoughts, aims and intentions in relation to any sequence

of interaction. The latter strategy is used here, with video-vignettes of classroom interaction being used to stimulate teachers' reflections about the ways in which they were using talk-in-interaction to pursue their pedagogic agendas in the CLIL lessons. As discussed in chapter four, video vignettes can 'tie down' the teachers' constructions to specific actions, and ensure greater mutual understanding between researcher and teachers (Speer 2005). The objective is not for them to remember what was going on in their heads during the interaction, but to elicit their verbal constructions in the form of descriptions and accounts of what they see on the video. This analysis, then, does not set out to explicate the interaction itself, but to produce another layer of data in which teachers' practical knowledge as a discursive construction can be examined.

The chapter has a double analytic strategy, in that it very clearly orients to work in which qualitative interviews are seen as interactionally alive encounters, not just transparent windows onto the lifeworlds of the participants. In this sense, the overall sequential organization of the interviews, the resulting discourse structures such as discourse units, the actions being carried out by both participants, and the management of the topics talked about are all foci of analysis. However, in keeping with Holstein and Gubriums' (2004) concept of the 'active interview', there is a balance between these 'how' issues and the 'what' of the current study - CLIL teachers' constructions of practical knowledge about language, interaction and pedagogic goals. Indeed, the chapter goes further in arguing that the 'what' cannot really be conceptualized without the 'how', thus raising implications for the study of teacher cognition, which will be addressed in chapter nine.

The chapter is organized as follows. The next section provides an overview of the micro-contexts in the corpus, linking this to programme and institutional factors. The main section of the chapter is divided into five sub-sections, one for each of the micro-contexts identified in the corpus. Illustrative examples from the corpus are presented and analysed along with extracts from the teachers' comments on viewing the relevant vignettes. The analysis focuses on the substantive issues that the teachers themselves topicalized in their accounts of practice, such as knowledge of learners' epistemic states as regards conceptual subject-matter content, instructional aims and strategies, classroom management and procedures, and self. In keeping with the methodological approach of the study, the analysis also focuses on the accounts as themselves action-

oriented, showing how the teachers built their descriptions of practice with a view to stake and interest, and by carrying out such actions as evaluations of the success or otherwise of the interactional strategy, attributions of intention or epistemic states to themselves or others. In their constructions of practice, the *what* and the *how* were tied in together, with the result that it did not make sense to talk about the substantive concern that was a focus of attention without analysing what they were *doing* by talking about it in the way they did. Thus, aspects of the teachers' practical knowledge about language as a tool for learning are seen as active, part and parcel of the interactional business being carried on, and not as static contents of their individual minds.

6.2 Overview of the CLIL classroom micro-contexts

As described in chapter five, analysis of the video data led to the identification of five micro-contexts, particular configurations of classroom activity which were signalled by shifts in activity, movement, gaze, topic-focus, turn-taking systems and overall sequential organization of interaction. Following Seedhouse (2004), each of these micro-contexts were a product of the reflexive relationship between interactional organization and pedagogical goals. Five micro-contexts were identified, each relating to a broad set of pedagogic goals that were stable across the four classrooms and the four different academic subjects. These micro-contexts, and the proportion of classroom time they accounted for, are shown in table 6.1.

Each of the micro-contexts will be examined in detail in the following section, but here it will be useful to provide a brief overview. As may be expected, the micro-context in which teachers worked directly with learners in whole class interaction with the

CLIL classroom micro-context	Percentage of total time
Direct instruction	29
Task setting	11.5
Task-based activity	27
Task checking	26.5
Orienting learning	6

Table 6.1. Classroom time accounted for by micro-contexts

pedagogic focus on some aspect of content-related skills, knowledge or understanding, took up a substantial amount of lesson time (nearly 30%). However, what is striking about these data is that the trio of task-related micro-contexts (task-setting, task-based activity, and task-checking) together accounted for 65% of the total lesson time. Thus, the most common type of activity in these classrooms, across the four subjects, was for the teacher to set up some task or activity that the students would do in pairs or small groups. The teacher would then monitor and sometimes intervene while the students did the activity. This would then lead into a whole-class feedback session, in which the students reported back on what they had done and the teacher provided evaluative feedback and guided them towards the 'official' scientific, historical etc. version of the phenomena they had been working on in the task. This finding provides evidence that the constructivist or 'hands-on' pedagogical approach to teaching advocated by the bilingual programme and positively commented on in the external evaluation, was reflected broadly in these four teachers' classroom practices. The other micro-context, orienting learning, was also a reflection of the programme's goals, in that it consisted in teachers providing explicit descriptions of learning goals, what topics would be worked on, and rules and norms for participating in the classroom beyond a single, specific activity. Within each micro-context, teachers oriented to a set of more specific pedagogic goals, related to the subject and the particular topic they were teaching. It was at this level that the comments elicited by the viewing of the video vignettes came into their own, as these were able to allow insights into the teachers' topic-specific pedagogical constructions, as these were built into their accounts of their teaching practices.

6.3 Teachers' enactments and constructions of practice in the micro-contexts

6.3.1 Direct instruction micro-context

Direct instruction is a micro-context in which the teacher interacts with the whole class on some aspect of the knowledge or skills relating to the content topic being studied. A range of more specific pedagogic goals can be achieved through direct instruction, such as getting students' ideas about a topic, introducing or reinforcing a concept, building knowledge together, or revising previously-taught material. In terms of topic, the focus

is always on some content-relevant knowledge, understanding or skill. Even where topics may seem to be 'everyday', they are used to elicit learners' ideas, usually as a preliminary to introducing the subject-relevant concepts or skills. A key characteristic of this micro-context is that the interaction is not mediated by any task or activity carried out by the learners. However, the interaction is often based around a piece of material, such as a coursebook text, or an artefact that the teacher has brought into the classroom. It is also often characterized by the teacher's use of a visual display, such as a slide or by writing or drawing on the black/whiteboard. Interaction patterns in this micro-context can range from canonical IRF sequences with known-answer questions (especially if going over previously covered content), more open dialogic interaction with referential questions (when eliciting students' views on a topic) or non-interactive long teacher turns (when explaining a concept, for example). All three patterns were found in this micro-context in all four classrooms. However, as conceptual understanding is particularly salient in science teaching, illustrative examples from the CLIL biology lessons are analysed here, along with a selection of the teachers' comments on viewing the video vignettes.

In the first of her two lessons on the topic of genetic variation, the teacher was eliciting from the students their own knowledge and experiences of mutation, before introducing the scientific version:

(6.1) BIOLSN2

```
 1   T:    so so what do you think a mutant is?
 2         have you ever seen a mutant anywhere?
 3         (2.4)
 4   S:    films
 5   T:    mm? in films?
 6         (2.0)
 7   T:    can you give me an example of a mutant?
 8         (1.2)
 9         what is a mutant?
10   S:    in plants when you -
11   T:    in plants?
12         (1.0)
13         do you have any mutant plants at home?
14   S:    no (      )
15   T:    a mutant.
16         it sounds like
17         (2.5)
18   S2:   [the Doberman
```

```
19   T:    [something that happens in films
20         but (.) actually it doesn't.
21         it happens in nature. hm?
22   S2:   and the Doberman?
23   T:    the Doberman (.) is that a mutant?
24         the Doberman?
25   S:    (        )
26   T:    it looks it looks weird yes
27         but it's not a mutant actually
28         (1.4)
29         the Doberman=
30   S:    =it's a mixture
31   T:    the breed. it's a mixture yes (.) of what.
32   S2:   of races of dogs <of dogs races>
33   T:    different uh breeds you say (.)
34         razas breeds (0.8) of of dogs (.)
```

This extract is a typical example of the interaction in the Direct Instruction micro-context when the teacher's pedagogic goal is to work directly with the learners on their own conceptions of an aspect of subject-matter knowledge. Referential questions are used to elicit students' opinions (line 1), experiences (lines 2 and 13) and knowledge (line 7). The topic is 'everyday' in that it covers experiences that anyone can have (such as watching films and having or seeing plants). Students' offerings may or may not get topicalized by the teacher, as can be seen at lines 4 and 10 where 'films' and 'plants' do not really become substantial topics. It is not until S2's offer of the Doberman breed of dog as a possible candidate for mutant status, that a student's contribution is taken up by the teacher at line 23, but the teacher herself closes down the topic by denying the Doberman's mutant status (rather than, for example, asking the S2 why he thought a Doberman might be a mutant), and the topic shifts at lines 33-34 to a language-focused repair sequence.

In her comments on the video vignette of this episode, the teacher identified the purpose of the interaction (in the interview transcripts, 'I' stands for interviewer, and 'T' for teacher):

(6.2) VSC4

```
1   I:    so what was your purpose with this-
2         with these questions
3   T:    my purpose,
4   I:    at the beginning of this
```

```
 5   T:    yeah what I wanted was to find out
 6         what they what mm
 7         what conception they had about a mutant
 8         the word mutant sounds so weird [you know=
 9   I:                                    [mm hm hm
10   T:    =I wanted to find out .hh
11         what their eh knowledge about mutants was.
12         just that
```

The teacher's construction of this sequence is consistent with the pedagogic goals identifiable from the interaction itself. Referential questions about experience or knowledge are a suitable strategy when the goal is 'finding out' students' conceptions or knowledge. However, her strategy as described in her comments was not only to find out what they thought, but to identify erroneous conceptions:

(6.3) VSC4

```
1   I:    so the questions in this section then
2         are a bit different are they
3         from the ones that you asked at the beginning?
4   T:    yes, because the ones of the mutant
5         I knew that they were going to
6         come with misconceptions.
7         I knew that in advance (.) previously
```

So, not only is her pedagogic goal to find out what they think about mutants, but to expose the misconceptions she 'knew in advance' (line 7) that they had. She links this epistemic orientation (her own knowledge about the learners' knowledge) to her use of language in the classroom, by constructing a causal relationship between what she knew and the questions she asked (line 4). In her own terms, this strategy is successful in uncovering what she takes to be a 'misconception', i.e. that the students think that a Doberman, perhaps because of its 'weird' appearance, is an example of a mutant:

(6.4) VSC4

```
1   T:    one of the students mm
2         came up with this idea of of breed
3         a dog breed of dogs the Doberman (.)
4         and he thought he wanted to talk about that
5         he- he said he put that
6         as an example of a mutant
7         and I had to deconstruct that idea
```

```
 8         so that that's exactly what I was trying to do
 9         and it took me ages to get back
10   I:    heh heh
11   T:    to my cla(h)ss (          ) because I mean
12         I wasn't meaning to talk about cross breeding
13   I:    hm
14   T:    in that lesson so that just was coming
15         something that moved me
16   T:    hm
17   I:    sidewards to something else
18         and then I had to go back
19         to what I was really wanting to teach
20         at that very moment so
21   T:    and what-
22   I:    I had to introduce the idea of cross breeding
23         with two examples
```

As was generally the case throughout the data, before attributing an aim or purpose to him or herself, the teacher provides a description of what is going on. However, these descriptions were not just disinterested factual accounts. This is seen here in the way the teacher builds her description in two ways: by giving what happened as simple facts, and by attributing cognitive or intentional states to a student. In terms of constructing facts, the student 'came up with' the idea of the Doberman dog (lines 2 and 3), and he put forward this breed of dog as an example of a mutant (lines 5 and 6). In terms of cognitive or intentional attributions, the student 'thought' he 'wanted' to talk about this (line 4). This forms the background to the purpose identified by the teacher, 'deconstruction' of this idea (line 7), and this is built into her account as an explicit statement of purpose at line 8. The teacher also constructs her action as an obligation (she 'had to' deconstruct the idea), thus making available the inference that her interactional decision to engage in 'deconstruction' was a necessary consequence of what she has described as taking place. Furthermore, at line 12, the teacher uses more intentional language from the cognitive thesaurus ('I wasn't meaning to') to construct her interactional decision as a deviation from what she had been intending to do in the lesson. In this teacher's account of practice, then, classroom talk is being constructed as a tool that can be used to work directly on learners' cognitive states, by 'deconstructing' erroneous ideas about a concept from science. It is a description of practice that constructs interactional decisions as being responsive to the students' perceived epistemic states. In terms of practical knowledge, it combines knowledge of conceptual content, learners' cognitive states and language as interaction.

The reflexive relationship between pedagogic purpose and interaction in this micro-context can be seen in how this episode developed into a direct explanation by the teacher of the 'scientific story' of mutation. After 'deconstructing' the 'misconception' and clarifying the difference between cross-breeding and mutation, she gives a 'real' example of mutation, albinism, and presents the scientific explanation:

(6.5) BIOLSN2

```
 1   T:    so (.) listen (.)
 2         this is the way it is.
 3         I'll write something
 4         on the board for you okay?
 5               + starts writing on board
 6         okay proteins are over (.)
 7         have you studied at all?
 8   S:    (yes)
 9   T:    okay listen (.) you all know this?
10         you know this don't you?
11         there is eh compound A
12         (1.5)
13         that's gonna turn into a compound B.
14         okay?
15         chemical reaction catalysed by an enzyme
16         (1.0)
17         one enzyme enzyme (.) one (.) okay?
18         (1.2)
19         enzymes are proteins
20         (1.0)
21         are they not? yes
22         so there must be one ↑gene (.)
23         gene one (.)
24         >that codes for this<
25         enzyme one. do you agree?
26   SS:   yes=
27   I:    =yes (.) now okay now
28         (1.2)
29         compound B turns into compound C.
30         (1.2)
31         and this (.) chemical reaction
32         must be catalysed (.) by enzyme ↓two
33         which in turn would be
34         (1.6) ((writing on board))
35         >coded for by< gene two.
36         do you agree?
37         (1.0)
38   SS:   (      )
39   I:    yeah? well that's the way it is.
```

In this extract, the teacher's pedagogic goal is to present to the students the scientific version of how mutation comes about. At lines 2 and 39, she reflexively signals to the students the epistemological status of what she is explaining, building a version of reality that is not a question of opinion, but uncontestable fact, just 'the way it is'. Rather than producing first pair parts designed to elicit some content, here the teacher either produces both first and second pair parts herself (line 21) or elicits displays of understanding by using the question 'Do you agree?' (lines 25 and 36). We are no longer in the realm of exploring students' ideas dialogically, as in the 'mutants' example, but in the realm of scientific knowledge which tells us how things are in nature, not just because someone says so. In her comments on the video vignette, this teacher described her purposes in terms of the students reaching the 'correct' conceptual understanding:

(6.6) VSC4

```
 1   T:   that's the way it is (.) very (0.2)
 2        they can say whatever they they want to ↓say (0.2)
 3        but in the end I try to (.) focus (0.8)
 4        to (.) ↓science=
 5   I:   mm hm
 6   T:   =so that they get, (.) they get an idea
 7        which is scientifically co↓rrect=
 8   I:   hm
 9   T:   =I mean <no matter what they think,>
10        they will end up they need to end up
11        by knowing that,
12        .hh some things are mainly (.) genetic, (.)
13        and most things are mainly (.) both. Hhh
```

Here, the teacher, in her construction of practice, draws the distinction between the much more open kind of interaction in the 'mutant' sequence ('they can say whatever they want to say - line 2), and getting an idea which is 'scientifically correct' (line 7). It is a clear orientation to conceptual change, and it is put in quite strong terms ('no matter what they think' - line 9). Her role, and it is built up as an obligation (she 'had to' deconstruct the idea about the Doberman), is to bring her students to an understanding of the scientific knowledge, the scientific worldview being 'the way it is'. Later, in her video-based comments, she distinguished between the different kinds of interaction and their purposes:

(6.7) VSC4

```
 1   I:   if you compare this bit
 2        with the first bit we saw (.)
 3        what about the way
 4        you are interacting with the class.
 5   T:   oh well (.) quite different
 6        because the first bit
 7        that you just showed me
 8        I was interacting more
 9        because I was just
10        talking to the class
11        ((self-quote)) what do you think
12        well (.) just I mean
13        we were just talking
14        I didn't need any writing on the board
15        I didn't need any kind of
16        scientific aspect
17        (1.2)
18        whereas in this one
19        they did need to understand
20        the chemistry of it
21        I mean the science that's behind
22        all the thing you know.
23   I:   hm mm
24   T:   sometimes you just talk about things
25        and you give your opinions
26        and I mean it's not a very
27        scientific way of teaching
28        but some other times it has to be
29        more well this is because of that.
30        you see, this is what's behind it.
31        I mean it's not because you say it (.)
32        it's because this is
33        what's going on inside a cell,
34        this is the chemistry part of it,
35        biochemistry part of it.
36        that's it so.
```

In the first part of her long discourse unit (DU), (lines 5-22), the teacher compares the two sequences, script formulating them as one-off events and not as instances of any wider practice. She characterises the first sequence as 'just talking (line 13), while in the second, she talks about the need to understand the science 'behind' the thing they were talking about (lines 21-22). However, in the second part of her discourse unit, (lines 24-36), she switches to a script formulation of her usual practices beyond these specific instances. This is signalled by her word-selections of 'sometimes' (line 24) and 'some other times' (line 28). She describes one way of talking as just getting the

students'opinions, which is not very scientific, while the other way of talking focuses on the science itself, which is not a matter of opinion ('it's not because you say it' - line 31). In this shift from describing a specific incident to formulating her general practices, we can see how a teacher's pedagogic constructions around one topic can provide a window onto their practical knowledge more generally. There is evidence that this teacher is describing her practices in teaching science in this micro-context more generally, not just in the topic of genetic variation.

The analysis of this teacher's enactments and constructions of practice in this micro-context provides evidence of the ways in which a CLIL teacher can use language in interaction as a tool for achieving specific pedagogic goals. The organization of the interaction changes as the pedagogic goals shift, in this case, from a more open and dialogic exploration of students' views, to a relatively non-interactive explanation of a the scientific view. Even within one classroom micro-context, this CLIL teacher is seen to have access to a repertoire of interactional practices with which to achieve her pedagogic goals. In constructing her practices on watching the video vignettes, her descriptions of the interaction and her pedagogic goals were aligned with the interactional agendas as played out in the classroom interaction. Her enactments and constructions of practice were, in an important sense, coming from the same place.

6.3.2 Task-setting micro-context

Task-setting is the micro-context in which the pedagogic focus is the successful and expeditious accomplishment of some learning task or activity. It is an essentially managerial or procedural context (to use the terminology introduced by Seedhouse [2004] and Walsh [2006] to describe L2 classroom interaction). Often, the teacher is giving instructions about how to do an activity, for example, the ways in which an instrument or piece of equipment should be used, the format in which the students are expected to work on the task, or the time allocated for it. As Walsh (2006) shows in his description of 'managerial mode', this micro-context is characterised by long teacher turns with only minimal student verbal contributions. This extract, from a third year geography lesson on development, is a clear example of this micro-context. The teacher is giving instructions on how to do an activity which consisted in filling in information about factors of development in a grid:

(6.8) GEOGLSN3

T: now I would like to stop now for a second
I want you to ↓do (.) another activity,
with (.) the photocopy you have.
okay everybody has this grid?
(4.0)
everybody has this grid correct?
photocopy? it was on page 4.
(24.0)
+students looking to see if they have photocopy
↓okay. everybody has that?
(0.4) okay yah development?
measuring development? (1.5)yeah? ↓okay.
remember that when we spoke about development,
we said there were different uh factors (.)
to make a measure how developed the country was,
or it wasn't, okay?
so, here is an activity for you to uh
to be aware of the important facts
which make an area developed (.)
more developed or less developed.
and uh we don't want you to reflect on ↓this.
okay, so. here is a ↑grid
where there are eh different terms,(.)
and you have to ↑think <how important they are>
to measure the development in a ↓country.
(.)uh (.) placing the most important on ↑top
of the ↑diamond (.) right?
and: uh considering which is the least important
at the bottom. (1.2)
you can also ↑number them if you ↑want to, okay,
so: the one on top can be (.)↓one (.)
and those following on the second (.) stage there
if you want to say that, you can say:
(.) one A one B,
so the third row would be: three A three B three C
if you want to. okay? ↓so.
the factors to consider are the ones,
which are in the square there. can you see them,
SS: yes
T: what's the first one.
S1: car [ownership
S2: [car owner-
T: car ownership o↑kay (.) what's the second there.
SS: inter[national trade
T: [↓trade okay.
(.) uh spend a minute reading very quick-
them very quickly
and see if you understand them.
+ students begin reading

One important task in any micro-context is for the teacher to effect a transition between whichever context the class was in to the new one, the new relationship between interactional organization and ongoing moment-by-moment pedagogic goals. This action can be seen at lines 1-3 where the teacher announces that they are stopping what they were doing and are going to do another activity. Other important interactional work at the beginning of sequences in this micro-context is locating the resources or materials to be used in the activity the teacher is going to set up. This can be seen here at lines 4-12 where a joint attentional focus on the piece of material to be used, the grid, has to be established before further instructions for the task can be given. In giving instructions for doing the task, teachers may have to reactivate certain concepts from previous learning which may be the focus of the activity, as the teacher does here at lines 13-21. At lines 22-29 the teacher shifts the focus from the topic to the nature of the task itself, giving instructions about where they have to place items on the diamond. Another common teaching practice in this micro-context is to offer the students options in the ways in which they can go about doing the task, as the teacher does at lines 30-36 here.

The sequence then moves into a 'checking' phase at lines 38-45, where the teacher ensures that intersubjectivity is maintained by eliciting from the students displays of knowledge at lines 41-42 and 44. The extract ends with another common practice, that of allocating the students time to do the task, at lines 46-47). If the sequence of interaction in the micro-context has been successful, the students will go on to do the task. If mutual understanding has not been successfully achieved, the teacher may need to step in again to troubleshoot and clarify the instructions for the task. Students may also ask questions or even negotiate about aspects of the task, ranging from such issues as timing, who they can work with, location of the activity in materials, and clarification of vocabulary. For example, a little later in this episode, the teacher responded to a student's other-initiated repair on the word 'grid':

(6.9) GEOGLSN3

```
1   T:    ↑okay so. among the ↓others (.)
2         very very  quickly (.)
3         <you mu:st place them> in the grid, (0.3)
4   S3:   in the?
```

```
 5   T:    in the grid, in the chart, (here) the grid,
 6                                    + points to photocopy
 7   S3:   yes
 8   T:    okay, very very quickly.
 9         and then, and at the same time
10         you have to think why you placed them ↓there.
```

At line 4, S3 carries out a repair initiation by repeating part of the teacher's turn up to the slot where 'grid' would be with a rising intonation. The teacher responds at line 5 by first repeating 'grid' and then offering a synonym, as well as reinforcing the identification of the material by pointing at the grid itself on the photocopy. S3 acknowledges this at line 7 with a display of understanding, and the teacher then continues with reformulation of instructions aready given, another common practice in this micro-context.

This sequence was shown to the teacher as a video vignette. The interaction in the video-clip based interview followed the typical pattern: 'open' invitation to comment from the interviewer, disourse unit (DU) response (see section 5.6.4) in which the teacher gives an account of what she was doing and her purposes, 'focusing' question by the interviewer to shift attention to how the teacher was interacting with the students, and more focusing work depending on the teacher's response:

(6.10) VSC3

```
 1   I:    okay (.) so what was happening there.
 2   T:    I was trying to fill in a grid
 3         and that grid has a content
 4         and at the same time they have both to make sure
 5         they do understand the issues
 6         the factors we are talking about
 7         and they have to read
 8         to put them in order of importance
 9         how important they are in development
10         and they have to decide which were the issues
11         which really showed development in a country.
12   I:    so the way you were speaking here
13         was the way you were speaking important
14         in terms of what you were trying
15         to achieve with this?
16   T:    yeah (.) I wanted them to both-
17         taking turns which make development be shown
18         and at the same time to make them aware
19         as I said that I do work on values
```

```
20          and to be aware of how important some (   ) are
21          make them think and realize
22          they are not political here
23          but they are starting to make up their mind
24          to decide which is more important
25          which is less important
26          and I think they got it well (.)
27          they understood the point.
28    I:    this activity (.) they had to-
29          it's a diamond they had to put things
30          so what's important for you-
31          for them to understand how to do the activity.
32    T:    I think so in order (not)to waste time later on
33          because they usually-
34          students tend to say yes to everything
35          and sometimes they do not understand
36          exactly what to do with a task
37          and maybe I insist too much
38          sometimes on explanations
39          because I hate to give instructions
40          one or two or three say yes we understand
41          and after 10 minutes they have done nothing
42          because they have been very very shy
43          not doing the activity
44          because they were shy to speak out.
45          so this is why I insist at the beginning
46          when I give instructions.
```

In her first DU at lines 2-11, the teacher is carrying out a number of different actions. First, at line 2, she formulates her immediate purpose, what she was trying to get the students to do (even though she expresses this as if she was the one who had to fill in a grid). However, she describes her purpose as more than just completing the grid, but understanding the issues they were dealing with as they ranked factors in terms of their importance as indicators of development (lines 4-6). From lines 7-11 she describes what the students have to do to complete the task. Interestingly, in the interview situation, she is taking on the identity of informant, letting the interviewer know what is going on. At lines 12-15, as in all the video-vignette interviews, the interviewer asks the 'focusing' question, which projects a response in which ways of talking or interacting in relation to pedagogic goals is made relevant. However, in this case (and this was a frequent occurence), the teacher, in her second DU at lines 16-27, maintains a topical focus on her pedagogic aims, rather than on any specific ways of talking or interacting. She highlights the importance of values in her teaching (something she had talked about in the CoRe interview), and of getting the students to think for themselves (lines 21-25). At lines 26-27, she carries out another action frequently found in the video-vignette

interviews, an evaluation of the effect of her own actions in the classroom. In this case, it is a positive evaluation, but in others, the teachers negatively evaluated what they saw on the video in terms of its effectiveness.

It is not until the interviewer asks the second focusing question at lines 28-31, in which he shifts attention to the topic of ensuring that the students understand how to do the activity, that the teacher produces a DU in which interaction is topicalised. This occurs at lines 32-46, where the teacher gives a rich account of her interactive practices in giving instructions, script formulated as what she does normally (not just on this occasion), with the use of 'tend to' (line 34), 'sometimes' (lines 35 and 38), and the use of the 'habitual' present tense in her description of her practices. At lines 37 and 38 there is an example of a more negative evaluation of her practices ('maybe I insist too much'), but this is expressed tentatively ('maybe') and is immediately followed at lines 40-44 by a justificatory account of why she does this.

Overall, in this extract, the teacher builds into her descriptions of practice a range of practical knowledge categories. Knowledge of instructional activities appears in her concern that the students complete the grid properly, and knowledge of subject matter appears in her talk about the importance of them understanding the factors indicating development. Underlying aims of instruction emerge in her talk about values and the importance of getting the students to think, and knowledge of learners is prominent in her concern for their epistemic states, both in understanding the relevant concepts, and in understanding what to do in the activity. This suggests that task-setting is a rich interactional context (in spite of its superficially non-interactive character), in which a wide range of pedagogic goals is realised. It projects the relevant task-based activity, and if unsuccessful can impair or even scuttle the successful completion of that activity. Although the teacher doesn't explicitly mention the fact that an L2 is being used for instruction, we can interpret that her 'insistence' on clear instructions, and her experience of activities going wrong due to unsuccessfully given instructions, is relevant to this context. Furthermore, task-setting was a frequent context for language-focused practices (see chapters seven and eight), such as the 'grid' sequence described here, showing that focusing on aspects of the L2 was oriented to as necessary for the establishment of sufficient mutual understanding for activities to run smoothly and accomplish their pedagogic goals.

6.3.3 Task-centred activity micro-context

In the task-centred activity micro-context, students work on some task that has been assigned to them by the teacher. For most of the on-task time, the students work in pairs or small groups, and the teacher is not involved or only involved minimally in the accomplishment of the task. However, teachers monitor the activity, patrolling the room and approaching groups either on their own initiative or when invited to do so, usually when a member of the group asks a question. Thus, as a teaching practice, there is teacher-student interaction in this micro-context, as the usually brief interactions do not signal a change in activity to a new micro-context, but are designed to facilitate the successful accomplishment of the task in this micro-context. In this extract, from a first year technology lesson, the students have been working in small groups to begin making a wooden toy. Prior to the teacher's approaching the table, the group had been engaged in their own private interaction around the task of sawing the wood for the toy. The teacher has been moving around the room, interacting with students at different tables, sometimes responding to questions, at other times interacting with the group on his own initiative, as is the case here. The teacher approaches their table and engages in this exchange with them:

(6.11) TECHLSN2

```
 1   T:    you are working very good. you know (.)
 2         they aren't doing any previous (.) drawing (.)
 3         you are doing very well (1.0)
 4         what's your drawing (.)
 5         is this one the toy you wanna do?
 6                    + students nod affirmatively
 7         (1.8)
 8         you start (.) saw it, (.)
 9         and then you do another one just like this one.
10         (1.2)
11         and then in the meanwhile
12         you can saw the arms (.) and the legs.
13   SS:   okay
```

In this short extract, the teacher carries out a range of teaching actions. At lines 1 and 3, he gives the group positive feedback on the way they are doing the task. He highlights

the fact that another group, unlike them, hasn't done a drawing to prepare for the making of the toy (line 2). At lines 4 and 5, he asks questions about the students' intentions, as a pre-sequence to the advice-giving sequence at lines 8-12, which the students acknowledge with 'okay'. In terms of pedagogic actions, this could be seen as an example of dynamic assessment, as the teacher not only gives the students feedback on their performance so far, but provides mediation in the form of guidelines for successful completion of the task. However, in spite of the sophisticated and effective use of the L2 as a teaching tool in this extract, the teacher, on viewing this sequence as a video vignette, gave a rather negative evaluation of his own competence in this micro-context generally:

(6.12) VSC2

```
 1   I:   can you talk about this kind of situation
 2        a little bit.
 3   T:   no that's quite often (.) over (1.0)
 4        in at the beginning of when they are starting
 5        building whatever making whatever they have to
 6        make in the workshop .hh
 7        they don't know how to get started with the thing
 8   I:   mm
 9   T:   they don't know where to start from
10        or they don't know
11        so <I (1.8) should help every work every team
12        work> fo- more particularly. (1.5)
13        a::m (1.0) I may tell you (.) this is where I find
14        myself not so:: (1.8) prepared to teach in English
15        because ↑those kinds of things
16        when you're in the classroom I manage
17        with the language I have to use very very well.
18        but here I find myself that I don't find a certain
19        word that's >°I don't know°< (.)
20        because it's quite quite particular specific
21        language you have to use
22        ((quoting voice)) you have to put this thing
23        into this hole and drill this or whatever and this
24        (.) a(h)nd I don't find myself (1.5) comfortable
25        in the workshop speaking in English.
26        I would like to and that's .hh
27        where I want to to learn more English
28        and to practise more and more true English
29        but that's a thing and it's very difficult (0.5)
30        I am meant I am supposed to make them
31        speak to each other in English
32   I:   mm hm
```

The interviewer's question at line 1 projects a script-formulation discourse unit, and this is indeed how the teacher responds. Thus, at lines 3-12, he script-formulates the description as an example of a frequent situation in the workshop - the students find it difficult to get started, and he has to intervene to help the different groups (lines 11-12). However, this long DU, especially from lines 13-32, is extremely significant from the point of view of one aspect of practical knowledge: knowledge of self, and, more specifically, orientation to language as a matter of competence, in this case his own competence. That it is an orientation to his own competence in general, rather than an evaluation of this particular piece of interaction, can be seen in the way the whole DU from lines 13-32 is script-formulated as a description of a repeatedly occuring situation, not a one-off. At line 14, he describes himself as 'not so prepared to teach in English' in the workshop situation, as opposed to the classroom, where he 'manages quite well' (lines 16-17). He then goes on, at lines 18-23 to outline the reason for this lack of competence: the specific nature of the language required to interact in this micro-context, and goes on at lines 24-25 to describe his own feelings of discomfort in this situation. At lines 26-28, he switches to a future orientation, to action he would like to take to improve his own L2 competence, and ends the DU with an objective evaluation at line 29 ('it's very difficult') and an orientation to a contextual factor: his obligation to have the students use English among themselves (30-31). The teacher constructs an account of his practices in which he distinguishes between interactions in different situations, building a description of himself as differently competent in each situation, and identifying actions he can take to remedy the situation. That he does so with respect to one micro-context, task-based activity, suggests that CLIL teachers can orient to different interactive needs in using the L2 as a tool for teaching and learning.

6.3.4 Task-checking and feedback micro-context

The task-checking and feedback micro-context always occured after the students had completed some task or activity. Normally, the teacher regains the attention of the whole group, and then goes through the students' responses to the task, evaluating their contributions in terms of their alignment with learning goals. In some ways, the interaction resembled the Direct Instruction micro-context, but it is clearly distinguished by at least three features: (1) the interactional sequences can follow the structure of the task itself, for example by going through the answers to a series of questions or

problems; or (2) the sequence can follow the different groups who did the task, as first one group, then another, is asked to report back; (3) the topic-focus is on the students' ideas with the teacher carrying out evaluative moves on the appropriateness of findings, carried out on the public plane for the benefit of all the students. The focus is on knowledge as an outcome of the students' work *on the task*, not 'on-the-spot' elicitations of knowledge (either 'old' or 'new'), as in the Direct Instruction micro-context. In this sequence, from a third year history lesson in the ICT room, the task-checking and feedback follows the structure of the task, as the students identify parts of a church following a ground plan which they have displayed on their computer screens.

(6.13) HISTLSN2

```
 1   T:    now ↓okay (.) if you are- if we are-
 2         + walking towards screen at front of room
 3         tell me the name of the parts of- of
 4         the different parts of the ground plan
 5                                + sits at computer at front
 6         of room
 7   S:    (name,)
 8   T:    okay let's- wait for a moment.
 9         (9.0)
10         + teacher finds web page
11         okay, ↓so don't mind, don't mind,
12         the names in Spanish. now tell me, (0.8)
13         <what are the names of
14         these three pictures ↓here>.
15         (2.2)
16         three (0.4) ondulations? (.) these chapels here,
17         what are the name of that.
18   S1:   abse [s
19   S2:        [(abses)
20   T:    that's right. and this one? so we enter ↑here,
21         so what's the name of this central part.
22   S:    (the nave)
23   T:    the nave, that's right,
24         (I think you're doing) very well.
25         (2.8)
26         ↑LUCÍA (.) do you remember the name
27         of these two corridors,
28   S1:   e:h
29   T:    at the sides sides?
30   S2:   °aisles°
31   T:    what's the name of ↓this.
32   S1:   aisles(((pron: /'aɪzləz/))
33   T:    that's right the aisles here (.) good.
34         and <what cardinal point>
35         is pointing this part (.)
```

```
36          the apse what's this- the cardinal point for this.
37    S:    the east?
38    T:    it is the ↑east and this?
39    S:    [west
40    S:    [west
41    T:    west. that's right, okay (.) good (.)
```

Because the task-checking and feedback micro-context has as a pedagogic goal the evaluation of the students' responses to the task, it is a frequent context for IRF sequences with known-answer (display) questions. The teacher's role is to give feedback on the adequacy of the students' answers, which take the form of displays of knowledge. This extract is a clear example, with five IRF sequences in succession, as the teacher checks that the students have correctly identified the parts of the church on the ground plan. The shift into this micro-context is signalled at lines 1 and 2 in three ways: by the teacher using discourse markers 'now' and 'okay', asking students if they have finished and are ready to give their answers, and by walking towards the front of the room. Asking students if they are ready is a common practice in opening this micro-context, and perhaps because of the teachers' and students' familiarity with this discursive practice, it is produced in minimal, incomplete, form at line 1. At lines 3 and 4, the teacher sets out what she wants the students to do in a general way, that is, they are going to give their answers about the parts of the church. The interaction is thus a clear example of this micro-context in that it follows the structure of the task as parts of the church in the ground plan are identified.

It is not until lines 12-14 that the teacher initiates the first IRF sequence with a first pair part that requires a specific answer. Throughout the extract, the teacher uses the F move to not only accept the students' answers, but to evaluate them positively. This can be seen at lines 24, 33 and 41. Line 24 is a particularly noticeable positive evaluation, as it goes beyond a simple 'good' to topicalise a subjective positive evaluation by teacher. In this micro-context, there were also opportunities for a focus on language, particularly on pronunciation, as the students had to produce the appropriate L2 forms in their answers. An example can be seen at line 33, where the teacher recasts the student's pronunciation of the word 'aisles'. However, it is unclear how salient this recast would be to the learner, as it is part of the larger pedagogic action of positively evaluating the student's answer as correct in terms of content.

In her comments on the video vignette of this sequence, the teacher described what was happening and identified her purpose:

(6.14) VSC1

```
 1   I:    okay some comments (.) what is going on here.
 2   T:    okay what is happening is in a class before
 3         we studied the usual parts of Romanesque churches,
 4         Grecian churches in general,
 5         and we have seen the different parts
 6         in the Latin cross plan
 7         they have drawn on their books,
 8         and I draw on the blackboard.
 9         and they have seen the different parts.
10         but when we were analysing a little church
11         like (       ) the problem was
12         that there was not a Latin cross plan.
13         it was a very small church,
14         what is called a Basilica plan not the Latin cross
15         but nevertheless they were able to-
16         I was checking if they were able
17         to recognize the parts of the church
18         which were similar to the Latin cross
19         so for example the cardinal points
20         because the (       ) of all the churches exist
21         and was facing east and the main door facing west
22         and all those parts of the church
23         would be recongisable in any plan.
24   I:    they have done at the beginning of the lesson,
25         they did some task they filled in
26   T:    they did that in the class before I suppose
27         I have given them a kind of chart
28         with a cross plan(.)
29         and they did it in the class before yes.
30         I was explaining that (.)
31         so it was just checking if they recognized
32         the first thing at the moment I suppose
```

As is frequent throughout the data, in their responses to the 'what's going on here?' type of question, the teacher takes on the discourse identity of informant, by filling in the background to what can be seen on the video. In this extract the teacher describes the work that students have already done on the topic in a previous lesson (lines 2-9). At lines 10-14, she switches to the current topic - the 'little church' that had been the focus of the task in this lesson, pointing out that the 'problem' was that it was different from the churches they had studied in the previous lesson. However, in spite of this, at line 15

she positively evaluates how the students did the task (mirroring in the interview context the positive evaluations she had produced in the classroom interaction). At line 16, she identifies her purpose ('I was checking if they were able'), thus producing a construction of practice aligned with the pedagogic goals of this micro-context as seen in the classroom interactional evidence. This is reinforced by her repetition of the description of her purpose as 'just checking' at line 31. This extract is further evidence that the teachers, in their accounts of practice in response to the video vignettes, constructed the relationship between interaction and pedagogic goals in ways that were consistent with the classroom data. In this case, 'checking if they were able to recognize the parts of a church' was consistent with the pedagogic goals of the task-checking and feedback micro-context, in that the students' task had been to correctly label the different parts of the church, and the interaction in this micro-context had the pedagogic goal of checking whether they had done so.

While IRF sequences with known answers were a frequent resource in this micro-context, it was not the only way in which the teachers could use language in interaction to meet their pedagogic goals in dealing with students' responses to learning tasks. Students' responses to a task could trigger sequences of more dialogic interaction in which different points of view were contrasted, with the teachers using a variety of discursive and rhetorical means to work with the meanings students produced. For example, in a fourth year biology lesson on genetic variation, one student had decided in a table-filling task that hand size could be affected by environmental factors. The example the student gave was that playing the piano could make your hands bigger. In response, the teacher told the following story from her own experience:

(6.15) BIOLSN2

```
 1   T:    well you know what
 2         I once went to a concert hall (1.2)
 3         to hear a vi- a violinist (1.0)a violin player
 4         he was one of the best in the world
 5         he was Ita-Japanese (.) right
 6         and he was ↑ama:zing (.) he was incredible
 7         and I happened to be (0.8)in the first row (0.8)
 8         for once in my life (0.7) okay
 9         and I could s- I could appreciate (.)
10         the size of his hands (1.2)
11         and believe me- believe it or not (.)
```

```
12        his hands were so ↑tiny ↑sma:ll (0.8)
13        and was a violin player an- and very thick
14        small but very very very thick fingers
15        (1.0)it's amazing
16        so not always (2.0) using your hands properly
17        makes them cha:nge okay?
```

This is a specific type of teaching practice in which the teacher uses a personal experience narrative, in CA terms, a 'telling' with the rhetorical purpose of contrasting with a version of reality put forward by a student, in this case in the task-checking and feedback micro-context. The students, in completing the task of categorizing human traits into inherited and environmental phenomena, had produced one version of reality, which, as in the 'mutants' example analysed earlier in this chapter, was met with by a contrasting version from the teacher which has the aim of deconstructing the students' version. The teacher uses the turn design at line 1 to first signal that what is coming is a contrasting version by using the discourse marker 'well', and then signalling that this will be a 'telling' with her use of the pre-announcement 'you know what' (similar to 'guess what' - Schegloff 2007: 56). From lines 2-15 she relates the experience, building it as a first hand account and using quite highly-charged objective evaluations, as at lines 6 and 15. The pedagogic purpose of the telling can be seen in the coda at lines 16 and 17, in which she identifies the upshot or message of the story in terms of the content-relevant concepts being focused on in this micro-context.

In her comments on the video vignette of this sequence, the science teacher was at first critical of her own actions:

(6.16a) VSC4

```
 1          ((video playing))
 2   T:     ah yes pianist the story about the violin
 3          ((violinist story on video starts))
 4          I shouldn't have told them that (         )
 5   I:     ((stops video))
 6          why not
 7   T:     why not? because I I then- after- afterwards
 8          I thought it might not have been the best example
 9          [(                )
10   I:     [you thought afterwards? after the lesson
11          or after-
12   T:     yeah ju- just at the (.)
13          just when I <finished the story>
```

```
14          I said oh dear hah hah hah
15          I don't think this is the  [be(h)st example
16    I:                               [what- you said it to
17          yourself, [(                )
18    T:    [to myself of course of course becau-
```

This is an example of where the teacher, in responding to the video vignette, does not wait for the sequence to end, but comments while the video is playing, as in lines 2 and 4. Line 4 is a negative evaluation, and most likely due to his own research agenda, the interviewer stops the video and asks the teacher to expand on this. At lines 7 and 8, the teacher interestingly constructs her account for this not beng a good idea in terms of her thoughts at the time, in the lesson. She is doing 'remembering' of what went on in her mind just after telling this story in the classroom. At lines 10-11 the interviewer carries out a repair initiation on 'afterwards', and at lines 12-15 the teacher produces a clarification - she thought this at the time, just after telling the story. She constructs this remembering as a self-quote, as what she said to herself just after telling the violinist story.

However, on watching the rest of the video vignette in which she tells the violinist story, the teacher changes her evaluation of the effectiveness of the example:

(6.16b)VSC4

```
 1    I:    well let's watch it and see if- if you still think
 2          that ((I starts video again))
 3    T:    ((over video)) okay my conclusion ((more video))
 4          my conclusion is not that bad
 5          ((I stops video))
 6    I:    mm?
 7    T:    (      ) even though the example maybe is not the
 8          best one I think the: yeah the conclusion is not
 9          that bad because I would have expected that a
10          violinist (.)
11    I:    hm
12    T:    had very kind of long thin fingers=
13    I:    hm
14    T:    =because of [using his fingers=
15    I:                [hm
16    T:    =all the time
17    I:    hm
18    T:    (so what I would see)
19    I:    hm
20    T:    I mean that- the environmental=
21    I:    mm hm
22    T:    you see (.) but this was one- a very very good
23          violinist (.) and he had ↑such=
```

```
24   I:    mm hm
25   T:    =a short and fatty so it's it's [(.) not-
26         it's the influence of environment=
27   I:    hm
28   T:    =doesn't work that much=
29   I:    hm
30   T:    =(it appears) (.) it wasn't that bad (.) the
31         example=
32   I:    hm
33   T:    =but I think I didn't get to
34         (1.2) e::h nuance? matizarlo((Sp. nuance it))
35   I:    hm
36   T:    (.) as much as (.) I=
37   I:    mm hm
38   T:    =would have wanted. but any- anyway maybe they
39         understood the idea of of more genetics (.) behind
40         (.) a ↓trait (.) like that (.) size of hands,
41         shape of eyes things like that.
```

The teacher changes her evaluation of the sequence, by first maintaining the negative evaluation of the example itself (lines 7 and 8), but changing the evaluation of the conclusion she drew from it to positive (lines 8 and 9). However, a few lines later, she also changes the evaluation of the example to positive (lines 30-31), and identifies the problem as one of not being able to nuance the example enough (lines 34-38). She ends her account of the episode with another positive evaluation, the students will have gained understanding of the generic explanation of the phenomena being discussed (lines 38-41).

This is an interesting example of the phenomenon identified by Roth (2008), in which research participants in qualitative interviews may be led to articulate ideas about phenomena they have not been asked to talk about before. At the beginning of the viewing of the vignette, the teacher begins to negatively evaluate the episode by constructing it as memory of what happened (she hadn't seen the entire clip yet). On watching the video vignette, she changed her evaluation to a more positive one, particularly in achieving the aim of conceptual change in her students. This raises a question about the nature of this CLIL teacher's practical knowledge about using language as a tool for learning in this micro-context. If the data had been presented to her in a different way (a written vignette, a transcript, and elicitation to remember, a self-report) it is entirely possible that her evaluation and construction of her classroom practice would have been different.

What is clear, though, from the two examples of this micro-context, is that when students have been given a task to do which focuses them on some aspect of content learning, collecting and checking their responses is a context with potential for interactive possibilities that go well beyond IRF sequences with known answer questions. In another example from the corpus, the geography class got into a heated discussion about access to doctors and clean water in developing countries, and this happened in a task-checking and feedback micro-context, just after the class had filled in the diamond (see section 6.3.1) about factors of development. In her comments on the video vignette of this sequence, the geography teacher gave clear methodological reasons why this type of interaction happens:

(6.17) VSC3

```
 1    I:   what makes this kind of interaction happen.
 2         when they start speaking sometimes to each other
 3         and agreeing (.) disagreeing (.) arguing
 4         and putting forward arguments (.)
 5         what makes this happen, do you think.
 6   T:    probably when they do know
 7         what they are talking about,
 8         they have had time to be aware of that (.)
 9         and they have had time to speak a little bit
10         with their partner so they feel confident
11         to speak up and place out their points of view.
12         so if there is this little process
13         of working with your partner or someone else
14         and thinking (.) then we get to a preliminary
15         session to a big group they feel more
16         confident to express what they felt.
```

This teacher's construction of the relationship between pedagogic goals and interaction relates to knowledge of instructional strategies and activities. Students, in order to interact in in this context, need to know what they are talking about (lines 6 and 7), and this is brought about by being given time to build awareness and speak together with their partners (lines 8-10). Doing so helps them to feel more confident to express their points of view (lines 10 and 15-16). There is thus, in this teacher's construction of practice, a clear relation between the type of interaction produced in the classroom and the instructional strategies which may have led to this.

In constructing practice in this micro-context, then, the teachers draw on a range of the components of practical knowledge, including knowledge of aims (checking understanding of parts of a church), knowledge of self and own experiences related to subject matter conceptual understanding (the violinist story), knowledge of instructional strategies and methodological options (the development discussion). In their constructions of practice, the teachers generally build descriptions and accounts of what they are doing which are aligned with the pedagogic goals inherent in the interactional organization of the extracts in this micro-context.

6.3.5 Orienting learning micro-context

The fifth micro-context found in the CLIL classrooms is orienting learning. In this micro-context, the interaction did not focus directly on any content-related knowledge, skills or understanding, or on the performance of any specific instructional task or activity. Rather, the topic-focus was on the organization of the lesson, unit or curriculum itself, with learning listed as topics or activities, without getting into any specific topic or activity. It is in a sense another procedural context, but unlike the task-setting micro-context in that the focus is *not* on the next upcoming activity and its successful completion, but on aspects of the learning programme, whether at lesson, unit or longer-term level. In the following example, from a third year geography lesson, the teacher announces that today's topic will be development:

(6.18) GEOGLSN2

```
 1   T:    okay (.) so (.) today (.)
 2         today´s work
 3         we are going to work
 4         with the development development (.)
 5         as you can see in topic ↓five
 6         everybody has the ↑copies topic five
 7         (.)↓development
 8         and we are working with trade
 9         and aid as elements
10         which are really really influenced
11         influenced in the (        ) ↑okay
12         so today we will be doing a lot of
13         searching of vocabulary
14         and we will be working
15         with the lesson on pages 26-
```

As can be seen in the extract, topics are named or listed in some kind of series (development is 'topic five' - lines 5-6). The aim is to orient students to what they will be doing or to situate learning (sometimes projecting it into the future as in this example, at other times into the past as in 'what we've done'). Learning is also situated in terms of where it can be found, for example in the unit of a textbook or specific page numbers (as in line 15 in the extract). Activities are broadly characterized as 'what we'll be doing' as in lines 12-13 in which the teacher announces that the class will be doing a lot of vocabulary searching. Unlike the task-setting micro-context, there are no further details of how to do any one specific, next, upcoming task. In her comments on the video vignette which contained this sequence, the teacher clearly identified a pedagogic purpose in line with the interactional organization of the classroom extract:

(6.19) VSC3

```
 1   I:    okay (.) what is happening here (.)
 2         what is going on.
 3   T:    I was trying to introduce the topic (.) trying to
 4         make them think and make them - sorry cannot find
 5         the word now (.) trying to make them say what they
 6         know about it what they understand about
 7         development in order to focus the topic
 8         and start working with the topic itself.
 9         I was trying to take on a few key words
10         to focus the topic (.)
11         so they can think of the main issues in the topic.
12         and also I wanted them to see where that topic was
13         where the material was
14         what information of that topic
15         is in their textbook (.)
16         so this is why I referred to the source they have
17         so they know where to study afterwards.
```

At line 3, the teacher begins her discourse unit with a clear statement of her purposes in the sequence: trying to introduce the topic. Her elicitations of what the students know about the topic are preliminary to starting 'working on the topic itself' (line 8). She also states as a purpose picking out some key words that would help them to focus on the 'main issues' in the topic (lines 9-11). Her description is one of sketching out the topic in broad outlines, without getting into the specific learning objectives at the levels of knowledge or understanding of specific concepts (like, for example, the factors which indicate development, which were the focus of the main activity in the lesson). A clear indication of the teacher's orientation to the pedagogic goals of this micro-context

comes at lines 12-17, where the teacher builds a description of her intentions which precisely fits the pedagogic goals of this micro-context as seen in the classroom interaction. This is further evidence that both dimensions of this teacher's practical knowledge (enactments and constructions of practice) are aligned, in an important sense 'coming from the same place'. The interactional competence shown in the classroom interaction in talking into being, with the learners, this classroom micro-context, is mirrored by the teacher's own discursive constructions of her practices and purposes in the video comment interview.

6.4 Chapter summary and conclusion

This chapter has presented the findings on how the four CLIL teachers used language in interaction as a tool for teaching and learning, that is, to achieve both a broad set of pedagogic goals related to the five classroom micro-contexts, and more specific goals related to aspects of the content-topics they were teaching. Five micro-contexts (Direct Instruction, Task-setting, Task-based activity, Task checking and feedback, and Orienting learning) were broadly described and examples of each from the CLIL classroom interaction in the corpus were presented and analysed. Together with these examples, extracts from the video-clip interviews in which the teachers commented on vignettes from each micro-context were analysed. The analysis shows that the interactional competence shown by the teachers in establishing and maintaining these 'communication systems' to meet their pedagogic goals was reflected in their postactive (re) constructions of practice. Teachers produced descriptions of their actions and their goals and intentions which were congruent with the ways in which they were using language in interaction in the classroom. In doing so, they activated a broad range of aspects of practical knowledge, such as knowledge of curriculum content, knowledge of aims of instruction, knowledge of learners and their epistemic states, knowledge of instructional activities and strategies, and knowledge of self.

The overall conclusion to be drawn from the analyses in this chapter is that the CLIL classroom can be a rich and varied discourse environment, especially when a constructivist or 'hands-on' approach to learning is used. There is a contextual factor in operation here, as it is a stated goal of the Bilingual Education Project in which these

teachers worked, to use such an overall approach to learning. This accounts for the fact that the Direct Instruction micro-context accounted for a relatively small proportion of the classroom interaction in the corpus, in comparison with the three task-related micro-contexts. Such an overall constructivist approach to learning meant that, for these teachers, using the L2 in interaction as a tool for achieving a range of pedagogic goals, required the display of a sophisticated classroom interactional competence. This has implications for both CLIL classroom practice and teacher education, and these are discussed in chapter eight. Knowledge of language, as an aspect of the teachers' practical knowledge, thus emerged in the ways in which they set up and maintained, jointly with the students, L2 communication systems through which they achieved their moment-by-moment pedagogic goals, and this was related to the overall pedagogic ethos of the Bilingual Education Project.

However, there were no clear and unambiguous examples in the corpus of a micro-context in which an aspect of language was the pedagogic focus. In other words, the teachers did not do any sustained direct instruction of language, nor did they set up, monitor, and give feedback on any language activities. Language as an explicit focus of interaction emerged only in specific language-focused practices (LFPs), momentary shifts of attention to some aspect of the L2 such as word meaning or pronunciation, such as the example of 'breeds' in extract 6.1, and 'aisles' in extract 6.13. These could either be a proactive focus on language, in which the teacher selected some aspect of the L2 for attention, or a reactive focus, as in the two examples from this chapter, in which the teacher responded to the learners' L2 production. These two approaches to dealing with language are related to the second and third perspectives on language discussed in chapter three, that is, language as a curriculum concern, and language as a matter of competence. The next chapter examines the teachers' constructions of knowledge of language as a curriculum concern, and their related classroom practices, in which attention is proactively switched to aspects of the L2 while accomplishing the pedagogic goals of the different micro-contexts.

Chapter 7. Language as a curriculum concern in the teachers' knowledge, thinking and practice

7.1 Introduction

Chapter six addressed the first two research questions of the study by describing how the four teachers used language-in-interaction as a tool for achieving their subject-related pedagogic goals. It showed the reflexive relationship between the interactional organization of five CLIL classroom micro-contexts and the teachers' pedagogic agendas, and how this was reflected both in the analyses of classroom interaction and of the teachers' comments on the video vignettes. This chapter shifts attention to the second perspective on language as discussed in chapter three, language as curriculum concern, and maps onto the second dimension of teacher language awareness as discussed in chapter four, teachers' meatcognitive/metalinguistic knowledge as used in planning and teaching. It addresses the third and fourth research questions of the study, which are set out again here for convenience:

3. How do the teachers describe the roles of language in their practices in the pre-teaching CoRe interviews?
4. What aspects of language do the teachers focus on pre-emptively in classroom interaction and how do they deal with them?

As in the other findings chapters, the teachers' TLA is described and analysed in two dimensions: their representations and enactments of practice. In the first part of the chapter, the CoRe interview data are used to analyse how the teachers, in conjunction with the interviewer, constructed descriptions of practice in which the L2 was a curriculum concern. The analyses show how they describe the role of English in the curriculum in relation to content, what aspects of English they identified for proactive focus either in general or in relation to specific topics, and what instructional strategies they describe for the teaching or assessment of the L2. In the second part of the chapter, atttention shifts to the teachers' enactments of TLA in classroom interaction. The analyses focus on classroom interactional sequences in which the teachers shifted

attention to some aspect of the L2 *as* an aspect of the L2 (i.e. not as a component of subject-matter content). These sequences are termed language-focused practices (LFPs).

7.2 Teachers' representations of L2 English as a curriculum concern

This section addresses research question three, by presenting analyses of extracts from the CoRe interview data in which the teachers constructed descriptions relating to the L2 as a curriculum concern in their practices. The analyses begin by focusing on how the teachers described the role of the L2 as an overall curriculum concern, particularly the balance between content and language, before moving on to their descriptions of the different aspects of the L2 they focused on and any instructional strategies they identified. Throughout, the analyses show that, in constructing their descriptions of practice in this area, the teachers were not simply providing transparent descriptions of reality, but were constructing versions of their practices which were alive to the interactional business of the CoRe interview itself.

7.2.1 Teachers' representations of the role of L2 English in the curriculum: the content/language balance

The teachers' representations of the possible roles of language in organizing curricular content were consistent in that none of them described language as a main factor in planning instruction. However, even though in all cases there was a negative response to the question as to whether language was a factor in organizing the curriculum, this was mitigated by a later turn in which some role for language *was* identified. This can be seen clearly in extract 7.1, in which the technology teacher first describes the limited role for language in terms of teaching as if it were in Spanish, but then mitigates this with reference to language as 'parallel content':

(7.1) CoReINT2

```
 1   I:    do you ever use any language points
 2         or any language criteria to organize the teaching?
 3   T:    no I am just working as if it were in in Spanish
 4         actually=
 5   I:    hm mm
 6   T:    =but doing everything in English=
 7   I:    hm mm
 8   T:    =well sometimes I do certain spelling tests (.)
 9         or when I'm working in the workshop
10         I stop the lesson for a while the work for a while
11         to explain to them how the tools are called.
12         and how do you say that or how do you say whatever
13         but that's how do you say how could you say
14         that's a (2.2) a parallel content.
15         or something we do every all the time
16         because we are explaining in English
17         we don't focus in the language.
```

In this extract, and in all the responses to the question about the role of language criteria in organizing the curriculum, the second pair part to the question was delivered in an unmitigated way, with none of the indicators of a dispreferred response, as in lines 3 and 4 here. The pattern then was that the teacher would qualify this in the same or an immediately following turn, by giving a description of some way in which language *is* involved in their practices. In extract 7.1, this can be seen in the teacher's long turn at line 8, which begins with the discourse marker 'well', which indicates that he is going to qualify in some way what he has said. It is also significant that this teacher describes this work on the L2 as 'parallel content' (line 14), thus showing an orientation to language as another type of content in his teaching of technology.

In extract 7.2 we see another example of a negative response to the question about language as an organizing factor of instruction:

(7.2) CoReINT1

```
 1   I:    what about language,
 2         can language ever be erm a [factor=
 3   T:                               [(          )
 4   I:    =in organizing a [sequence=
 5   T:                     [mmm I'm afraid not
 6   I:    =of lessons or activities?
 7   T:    I (        ) say not.
 8   I:    mm
 9   T:    not in science=
10   I:    mm
11   T:    =maybe in English they do it that way=
```

```
12   I:    mm
13   T:    =but not in science I mean it's the content that
14         leads me=
15   I:    hm mm
16   T:    =and then if I happen to find certain language
17         points=
18   I:    hm mm
19   T:    =that I might think they're interesting
20         well then I kind of mm focus on them a little bit
21         more.
22   I:    mm
23   T:    but just just e::h just to follow my my science
24         contents
```

In this extract, however, the answer is delivered as an apology (line 5), as if having a focus on language in planning instruction was somehow to be expected and she was not fulfilling this expectation. However, as in the previous extract, she went on to further mitigate this response by identifying a role for language in her instruction, when, at lines 16-21, she describes the practice of focusing on 'certain language points' that she happens to find. Here, then, focus on language is being constructed as something incidental, which happens to come up in the teaching of a topic. This teacher also showed an orientation to a clear division of labour within the programme. Using language to organize instruction is something done in English as a subject, but not in science (lines 11-14).

Extract 7.3 again shows the pattern of a negative response about using language as a planning principle, followed by the identification of some role for language:

(7.3) CoReINT3

```
 1   I:    would you ever change the order of something
 2         or sequence something
 3         because of language, (.) issues
 4         (0.4)
 5   T:    hmm
 6   I:    or is it mainly the content that you use to-
 7   T:    no I don't think I: have that in my mind uh
 8         because I think when there is some problem with
 9         language or there is special different language I
10         have an activity
11   I:    hm mm
12   T:    for it for example Feudalism
13         ((long turn in which T describes vocabulary
14         activities for teaching Feudalism))
```

```
15          so I don't think I've got specially language
16          in my mind
```

In this case, the teacher identifies another instructional strategy, that of having specific activities to deal with language specific to the topic. She constructs knowledge about language in two ways: as mentally stored ('in my mind' - lines 7 and 16), and in the practical form of activities for dealing the language of specific topics.

In extract 7.4 we see a final example of this negative + mitigation pattern in constructing the role of language in the curriculum:

(7.4) CoReINT4

```
 1   I:    and would you ever think about any language,
 2         (0.4)uh criteria in organizing,=
 3   T:    =no I always think of the language afterwards
 4         or the type of specific vocabulary they will need
 5   I:    hm
 6   T:    rather than using the language.
 7         uh obviously uh ah I do want to focus
 8         on specific vocabulary
 9   I:    hm
10   T:    and try to insist on using it
11         and understanding concepts
```

Here, language is represented as something that comes 'afterwards' (line 3) and then further specified as 'specific vocabulary' (line 4). The negative + mitigation pattern appears again in one turn (lines 6-8). Here, at the micro-interactional level, we can see the tension between rather unmitigated denials of any role of language in planning instruction and the immediate (same or next turn) identification of some role for language. At line 6, 'rather than using language' ends on a falling, 'ending' tone, but this is immediately followed by hesitation phenomena and a contrastive 'do' at line 7, thus showing sensitivity to not simply and categorically stating that language has no role in organizing the curriculum.

The strength of this pattern can be seen in the fact that it could also apply to the teachers' constructions about their assessment practices. Extract 7.5 is an example:

(7.5) CoReINT1

```
 1   I:    are you assessing (0.5) the content
 2         and the language or just the content
 3   T:    mm I'm afraid I'm only assessing the science
 4   I:    hm
 5   T:    I must ↑say [ (.) I mean=
 6   I:                [yeah
 7   T:    =you want to know the truth heh heh heh
 8   I:    of course I do yeah
 9   T:    well I- I I assess e::h the  ↓content
10   I:    mm
11         (1.8)
12   T:    e::h well tha- that's what (.) eh
13         <accounts for> the final mark. (.)
14         I mean but I do to me I also assess their English
15         so I just write down if their English is good
16         not that good very good whatever (.)
17         I know it for me
18   I:    hm
19   T:    but it's not going to account for the final grade.
```

Again, at line 3, this teacher constructs her negative response as an apology (as she did in extract 7.2). At line 14 we also see the familiar pattern of mitigation in which, after a lengthy pause (line 11) , a clarification of the function of assessment of content (lines 12 and 13), she describes her assessment practices in relation to L2 English. Again, in the manner of turn construction here, we can also see an orientation to a rather secondary role for language assessment ('I *just* write down', 'not that good very good *whatever*', 'I know it *for me*') with the turn at line 19 re-emphasizing its secondary role in not being part of the final grade.

These four extracts show that, in the rhetorical design of their answers, the teachers, while clearly orienting to a limited role for L2 English in the overall organization of their instruction and assessment, did construct their descriptions in such a way as to make visible at least one way in which a focus on L2 English was a part of their practices. Because of the fact that the Bilingual Programme does expect some explicit focus on language, it is possible that the teachers have a stake and interest in building descriptions of practice which show a double orientation: a prioritization of and commitment to achieving content learning outcomes, at the same time as an orientation to language-conscious teaching.

This prioritization of content objectives can be linked to contextual factors in the Bilingual Programme, as can be seen in the following extracts. In extract 7.6, the

teacher had been talking about having more focus on language at lower levels (1st and 2nd year) and less at the higher grades (3rd and 4th year):

(7.6) CoReINT1

```
 1   I:   are you saying that you would do that kind of
 2        thing less at the higher levels?
 3   T:   yes. [(        )
 4   I:        [third and fourth year
 5   T:   yeah (.)  actually I do (.) maybe I shouldn't
 6        heh heh (.) maybe I shouldn't
 7        but actually I do because (0.2)
 8        probably because I'm more pre- erm
 9        (0.8) eh pressed=
10   I:   mm
11   T:   =you see I I got to teach many more things=
12   I:   mm
13   T:   =more complicated things
14   I:   mm
15   T:   and I can't just kind of stop there and relax=
16   I:   mm
17   T:   =and this kind of stuff which I really like=
18   I:   hm mm
19   T:   =but I have to go- keep going keep=
20   I:   hm
21   T:   =going forward and forward
22        cos there's a huge programme to teach you see=
23   I:   hm hm
24   T:   =that's one of the- [(.) that's one of the
25        drawbacks
26   I:                       [yeah
27   T:   [(.)   the limitations=
28   I:   [yeah      yeah
29   T:   =I mean you just can't kind of teach science
30        and English and eh=
31   I:   mm heh heh
32   T:   =relax on it=
33   I:   hm
34   T:   =you see what I mean
35        we have to we have to finish the progra::mme (.)
36   I:   hm
37   T:   programme .hhh so
```

Here, the teacher attributes her relative lack of focus on language at the higher grades to the institutional pressure to complete the syllabus. She describes herself as being 'pressed' (line 9) and having to teach 'many more things' (line 11). She describes the programme as 'huge' (line 22) and constructs the need to compete it as an obligation ('we *have to* finish the programme' - line 35). This contextual pressure may also be an

orientation in her construction of turns as potential self-criticism (lines 5 and 6). Again, there is interactional evidence of a tension between achieving curricular content learning outcomes and paying the attention to language that might be expected in a Bilingual Programme.

In extract 7.7, the geography teacher expresses this concern with content in rather stronger terms:

(7.7) CoReINT4

```
 1   T:   I am obsessed with this,
 2        and I think it (     ) my worries
 3        because I have the feeling
 4        that it is very important
 5        that they cover the important aspects in a topic
 6        and I should not leave anything behind
 7        which must- which may make a lack in their
 8        learning later on.
 9   I:   when you think about that
10        are you thinking about any comparison,
11        between the way they might learn about history in
12        English and the way others might learn it in
13        Spanish?
14   T:   yeah somehow it is yeah (0.4)
15   I:   can you say a bit more about that
16   T:   obviously as we are working in an integrated
17        programme and we are supposed to include different
18        activities which we have been learning through the
19        years communicative and introduce hands-on (.)
20        and introduce a very open way- way of methodology
21        so um there is a worry on how we are doing it
22        in the integrated programme (.)
23        because I have the feeling that a lot of people
24        are really- have put their eyes on us
25        both parents the ministry the British Council the
26        students my fellow colleagues here the Spanish
27        institution (.) so I have always had a feeling and
28        as years go by I think it is true that they are
29        always comparing what we are doing in the
30        bilingual programme and,
31   I:   hm mm are they comparing it with
32   T:   what they are doing in Spanish
33        and how much they are achieving etc.
```

In her construction of the contextual factors impacting on practice, this teacher uses a strong emotional terminology (‘*obsessed*’ at line 1, ‘*worries*’ at line 2, and ‘*worry*’

again at line 21. At lines 23-24 she uses a strong visual image, 'people have put their eyes on us') and she identifies a range of stakeholders (students, parents, the Ministry, the British Council) to whom she (and the other teachers in the Project) will be held accountable if the students do not achieve content learning outcomes as well as their counterparts who are being taught in Spanish. At lines 19-20 she describes the 'communicative' and 'hands-on' methodology they are expected to use, and, with her use of 'so' at line 21, links this to the worry about the teachers' practices.

It is interesting that another of the teachers, the technology teacher, also uses the term 'worry' in connection with this topic - how much of the curriculum he can get through:

(7.8) CoReINT2

```
 1   I:   hm mm are there any things
 2        that you would not use or avoid using
 3        because you're aware that English is the second
 4        language (.) things for example that you might do
 5        if it was Spanish but you don't do because it's
 6        English
 7   T:   er hhh
 8        (4.0)
 9        maybe I am not so worried of the contents
10        I am obliged or I am requested to teach
11   I:   hm mm
12   T:   so for instance this term maybe I'm not teaching
13        metals which is the second material I should teach
14        and I don't worry so much.
15        actually I wouldn't worry so much actually in
16        Spanish as well but more in English I think.
17        the- the contents I have to teach
18        that's not the most important thing
19   I:   it's not the most important thing
20   T:   I mean I prefer to teach better some contents
21   I:   hm
22   T:   than many contents or a lot of contents
23        but knowing that they are not going to understand
24        them
```

This teacher, in contrast to the teacher in the previous extract, orients to a *lack* of worry (lines 9 and 14) about getting through the topics in the syllabus. In doing so, he constructs his own actions as being in defiance of the institutional expectations as they are contents he is 'obliged' or 'requested' to teach (line 10), to the extent of dropping a whole topic from the curriculum (metals - lines 12-13). So, unlike the teachers in the

previous two extracts, who show a strong orientation to contextual pressures to cover all the material expected in the syllabus, this teacher voices a view sometimes heard in discussions of CLIL practice - that is, that it is better to cover less content thoroughly than attempt to cover a lot of content with the students not learning it so well. In his construction of practice here, the teacher draws a distinction between his possible practices if he were teaching this content in Spanish and those of teaching in English, but only as a matter of degree, as he is somewhat *less* concerned about covering all the topics in English than he would be in Spanish (lines 15-16).

7.2.2 Teachers' representations of aspects of L2 English for proactive attention

As has been seen in the extracts in the previous section, the teachers, in constructing their descriptions of the content/language balance, referred to aspects of language they would focus on. Thus, in extract 7.1 the teacher refers to spelling and vocabulary (the names of tools), in 7.3 the history teacher talks about vocabulary activities related to the topic of Feudalism, and in 7.4 the teacher refers to 'specific vocabulary'. In examining the teachers' pedagogical constructions about which aspects of language they identified for proactive attention, we move from their more general descriptions of practice to how they construct their practices relating to a specific curricular topic or unit. As discussed in chapter three, seeing teachers' pedagogical constructions as discursive representations of practice is more effective when linked to specific curricular topics. The focus is, then, on any aspects of L2 English that the teachers single out for proactive attention in their representations of practice in teaching a specific topic.

In the CoRe interviews, the teachers were asked if there were any language points related to the specific topic they were going to teach that they would pay attention to. The turn design of the first-pair part is important here, as the terms used move from 'language' to 'words' and 'texts'. The question was designed to get the teachers to produce discourse units on their practices in this area which would encompass a relatively broad view of what aspects of language could be focused on. Terms like 'vocabulary'. 'phrase' and 'text' were used as a minimal option in eliciting the responses, avoiding 'flooding' with terms such as 'genre' or 'literacy'. That said, it cannot be ruled out that the placing of vocabulary as the first mention of a specific

aspect of language may be related to the ways in which the teachers constructed their responses, which all highlighted vocabulary, almost exclusively, as the aspect of language they would focus on. Extract 7.9 from the CoRe interview with the biology teacher, in which she talks about the topic of genetic variation, is a clear example.

(7.9) CoReINT1

```
 1   I:    are there any erm (.) language aspects
 2         that you need to highlight?
 3         in terms of words, [vocabulary
 4   T:                       [yes
 5   I:    [(.) or even types of texts,=
 6   T:    [yeah
 7   I:    =or whatever=
 8   T:    =yes yes that's that's a good-
 9         a ve(h)ry good qu(h)estion of [yours (.)
10   I:                                 [okay (      )
11   T:    yeah I brought some I brought some examples
12         for you to take a look at (.)
13   I:    hm
14   T:    I mean words, words are-
15         there are a lot of new words ↓here
16   I:    hm hm
17   T:    uh but eh fortunately
18         they're not very different
19         from the Spanish words.
20         so you say chromo-chromosome
21   I:    hm
22   T:    cromosoma
23   I:    mm
24   T:    fibra de cromatina, cromatine ↓thread
25         [fibre whatever (.)
26   I:    [okay yeah
27   T:    e::h centrómero (0.5) centromer (.)
28         so [its it makes no=
29   I:       [hm mm
30   T:    = difference [you see?
31   I:                 [hm hm
```

At line 4, the teacher already indicates an orientation towards words, or vocabulary, as being the aspect of language she would highlight, in her overlapped 'yes' to the interviewer's mention of vocabulary. She then begins her long discourse unit response with what can be seen as two insert expansions (a comment on the question - lines 8-9, and indicating that she will use examples - lines 11-12). She explicitly states her focus on vocabulary at line 14, where she first identifies words as the area to focus on and then, at line 15, quantifies this with 'a lot of new words'. However, this is almost

immediately mitigated in a post-expansion in which she describes the vocabulary as 'not very different' from the Spanish words (lines 17-19). There is further mitigation, or downplaying, of the vocabulary load originally quantified as high, in the post-completion musing at lines 28-30 in which she states that 'it makes no difference'.

The discourse unit continues with the teacher introducing a description of her practices in this area, that of teaching the topic-related vocabulary in both languages:

(7.10) CoReINT1

```
 1   T:   so I try to teach them in both languages [(.)
 2   I:   hm
 3   T:   so that nobody could ever say (0.4)
 4        your students don't know how to say
 5        [chromosome in ↑Spanish=
 6   I:   [heh heh heh heh heh heh
 7   T:   =they only know how to say that in English
 8   I:   mm
 9   T:   because this ↑happens you see
10   I:   hm hm mm
11   T:   so I I I had t(h)o make sure [that they know=
12   I:                                [hm
13   T:   =>in both languages< (.)
14        so most of the times (.) it's the ↓same (.)
15   I:   mm
16   T:   it changes a little bit pronunciation that's ↓all
```

At line 1, she describes the practice, and then at lines 3-7 provides an attribution for this: it is so that no-one could say that the students don't know these words in their L1. Stake and interest are doubly active here. First, at the level of the practices she is describing, she indicates the need to ward off an accusation that may be very much alive in the context she teaches in. Second, at the level of the account she is producing in the interview, she constructs her description of practice in such a way that it comes across as a reasonable course of action ('because this happens you see' at line 9). The analysis of this extract shows that contextual, or situated factors play a double role in her construction of practice. That is, situation in terms of the context of the Bilingual Project in which she was teaching, and situation in terms of the sequential organization of the interview as an encounter. What this teacher's practical knowledge is in the area of topic-specific language is very much a product of both types of context or situation.

That the ways in which this type of practical knowledge is oriented to in teachers' descriptions of practice is more than an individual matter, and that there is significant sharing of repertoires of resources in their pedagogical constructions, can be seen in the following extract, in which the geography teacher describes what topic-related language she would focus on in a unit on trade and development:

(7.11) CoReINT4

```
 1   I:    so can you say something about
 2         what kind of language is activated in this topic?
 3   T:    yeah uh erm (.) there will be terms
 4         which define development
 5         like GNP or (0.2) and I try to compare
 6         what is the term in Spanish as well.
 7         and they will be- they would be using
 8         if I had time loads of numbers
 9         and graphs to compare (.) we'll see if I-
10         if we can do some activity of that sort
11         a::nd (0.3) um and the:n vocabulary which uh (0.2)
12         which is related with settlement with what is city
13         what urban growth (.) means=
14   I:    hm mm
15   T:    =so what development really means for a person=
16   I:    hm mm
17   T:    =and quality of life and things like that.
```

As with the biology teacher (and indeed the other two teachers, but space precludes showing all the extracts) this teacher highlights vocabulary as the area of language she would focus on in teaching the unit. This can be seen right at the beginning of her second-pair part, in her choice of 'terms' (line 3). At lines 5 and 6, as with the biology teacher, she describes her practice as 'comparing' the terms in both languages, though, unlike in the previous extract, she does not provide any attribution for this. The discourse unit ends at lines 15 and 17 with a summarizing statement (introduced with 'so'), which shifts the focus back to content. The work on vocabulary, then, is related to 'what development really means' and issues such as 'quality of life'.

Because the teachers produced as responses to this question quite long discourse units, which often focused on just one aspect of the L2 - vocabulary, the interviewer followed up with another question which asked them to focus on other aspects of language,

particularly if there was any focus on the characteristics of the texts they were going to use. Extract 7.12 shows the question and the biology teacher's response:

(7.12) CoReINT1

```
 1   I:    do you ever erm (.) erm (.)
 2         talk to them about texts are put together
 3         or how they have to write a text?
 4   T:    [no I don't
 5   I:    [how they have to organize it
 6         for example [(        )
 7   T:                [no no I don't know
 8         I can't    [do that
 9   I:               [is it-  but is it important, (.) do
10         you think, would it ever be important to do that?
11         [maybe it's not important
12   T:    [mmm  I couldn't possibly do it  [myse(h)lf=
13   I:                                     [hm
14   T:    =in in science  [no=
15   I:                    [hm
16   T:    =I think that has- that has to be done in English.
17   I:    mm
```

The negative second-pair part is delivered in an unmitigated fashion (line 4) with, at line 8 the beginning of an account for why this is so ('I can't do that'). Thus, her not focusing on how texts are put together is constructed not as her own choice, but as an external constraint (line 12- 'I couldn't possibly do it myself'). Again, as in extract 7.2, we see in this teacher's construction of the role of L2 English in her instruction a clear orientation to a division of labour between subject and language teachers (lines 12-16). The science teacher can't teach about texts because it isn't her job, and it is the English teacher who has the obligation to do this ('that *has to* be done in English - line 16).

In talking about the topic of texts, and how they might focus on them in their instruction, none of the teachers produced any descriptions of aspects of literacy in their subject. There was no mention of typical types of text, or text structures. The focus was on either specific topic and text-related vocabulary, or activities the students had to do with the text. Extract 7.13 shows both these phenomena in the geography teacher's response to the question about texts:

(7.13) CoReINT4

```
 1   I:    are there any texts, they have to deal with,
 2         any (.) any longer texts,
 3         I mean longer I mean more than
 4         .hh one or two  paragraphs
 5   T:    yeah there are
 6   I:    what kind of texts are they
 7   T:    uh it is about uh eh what development is
 8         what we understand by development
 9         it is in the textbook
10         I take it from there
11         and then they will have to read about .hh
12         about two different countries,
13   I:    hm
14   T:    and comparing how people live
15         and what they what people (       )
16         in a certain country
17         compared to a very developed country
18         with a developing country
19   I:    hm mm
20   T:    what they lack what the others have
21         and the terms such as: infant mortality
22         and (.) things like that
23         >which they have already learned<
24         in population
25   I:    okay
26   T:    in that unit.
```

In her long discourse unit response, this teacher focuses on the learning objective of understanding the content (lines 7 and 8), then the task the students have to do (reading about two different countries and comparing them - lines 11-20). She then goes on to focus on topic-specific vocabulary which will presumably come up in the texts (‘infant mortality’ - line 21). The interviews did not succeed in eliciting from the teachers any description of proactive focus on language at text or discourse level, and the tendency was generally for them to revert back to descriptions of aspects of the subject matter content or its terminology.

In only one case did what could loosely be described as a proactive focus on grammar come up in the CoRe interviews. This was when the biology teacher was describing a piece of material she used in teaching the topic of genetic variation, a cartoon about a pair of identical twins (figure 7.1):

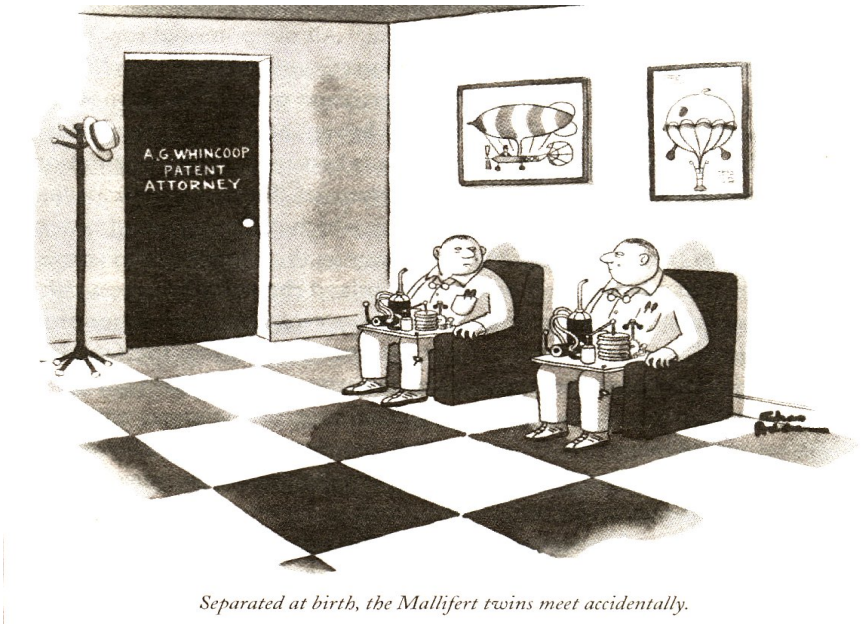

Figure 7.1. Cartoon used by biology teacher in genetics lesson

(7.14) CoReINT1

```
 1   T:   this is a joke that I-
 2        I use for my science lessons and
 3   I:   mm
 4   T:   I'm gonna use erm [(.)(          ) next.
 5   I:                     [okay
 6   T:   so it's just to show them
 7        how  how identical twins
 8   I:   hm
 9   T:   erm  what-  what's inherited (.)
10   I:   mm
11   T:   and what's environmental=
12   I:   hm
13   T:   =see what I mean?
14   I:   hm
15   T:   it's from a book in English
16        and it's very
17   I:   mm
18   T:   to me it's very funny (.)
19        I don't know if they're gonna get it=
20   I:   mm
21   T:   =or not but anyway-
22        for instance here I like it very much
23        because it says separated  at birth
24   I:   mm
25   T:   comma the Mallifert twins meet accidentally (.)
26        the first bit you see
27   I:   mm
28   T:   this is to me is very English separated at birth
29   I:   hm
```

```
30   T:    how would you say that in Spanish?
31         with the passive (voice) you see
32   I:    hm mm
33   T:    habiendo sido separados después del nacimiento
34   I:    yeah
35   T:    so:: long [you see ]what I mean
36   I:              [yeah yeah ]
37   T:    English is so straightforward
38   I:    mm
```

In the first part of this discourse unit, she indicates her purpose in using this piece of material, and this purpose is exclusively to do with the subject matter: to use the example of identical twins to illustrate the difference between environmental and inherited features (lines 6-11). However, at line 22 she shifts the topic to her appreciation of the linguistic qualities of the caption. She categorizes this type of construction as 'very English' (line 28) and produces a positive evaluation of English as 'straightforward' and by implication a more negative portrayal of Spanish as somewhat long-winded in comparison. This is done at line 35 both by her word selection ('so long') and the means of delivery (vowel stretching in 'so::').

This description prompts the interviewer to ask if this is the kind of language point she would focus on in class:

(7.15) CoReINT1

```
 1   I:    is that- is that the kind of thing
 2         that you might point out in the classroom
 3         [with the students
 4   T:    [yeah I would
 5   I:    yeah
 6   T:    certainly
 7   I:    yeah so-   [yeah yeah
 8   T:               [yeah two minutes you see
 9         just as as I told you
10   I:    yeah [the way
11   T:         [(          )
12   I:    the way you just did it yeah
13   T:    yeah the way I just did it
14   I:    yeah
15   T:    so for me to introduce language
16         in my science lessons
17         is this kind of stuff
18         ((some lines omitted))
19         so this is the kind of thing I usually do.
20         that's an example
```

At lines 15-19 she script formulates dealing with language in this way as a normal aspect of her practice, not just a one-off for this particular topic ('the kind of thing I usually do'). However, here she introduces this focus on language in the context of describing her practices in teaching the unit on genetics, although the actual language point she describes, an aspect of sentence structure, is constructed by her as a feature of 'English', of its 'straightforwardness' and is not related to any specific aspect of the topic. Interestingly, she did use this material in the video-recorded lesson, and did use it to focus on language, but not in the way she described in the CoRe interview. Rather, the language-focused interaction around this cartoon focused on the meaning of the word 'patent'.

In sum, then, the teachers in their preactive representations of practice in the CoRe interviews did not construct a focus on the L2 as a central curriculum concern. There was a clear orientation to the subject-matter content driving their instructional practices, with any focus on the L2 having a largely incidental role. In accounting for these practices, the teachers described a range of contextual constraints, such as having a crowded syllabus to get through and the risk of criticism that the students in the BEP were not learning as much content as their non-bilingual peers. When the L2 was identified as a curricular focus, it was in largely in terms of content-related vocabulary, such as terms for concepts or tools to be used in the workshop. Other aspects of the L2, such as grammar or discourse-level phenomena were not generally identified as a curriculum concern, even with prompting from the interviewer.

In addressing the fourth research question, the attention shifts to whether, and how, L2 English emerged as a curricular concern in the teachers' classroom practices. The teachers' representations of practice analysed in the first part of this chapter give grounds for hypothesizing that there will be a somewhat limited focus on language in classrom interaction, that such focus as there is will be incidental, and that vocabulary will be the L2 area most focused on. The rest of this chapter addresses these questions by describing the teachers' proactively-oriented language-focused practices (LFPs).

7.3 L2 as a curriculum concern in the teachers' language-focused practices (LFPs)

Language-focused practices (LFPs) are teaching practices in which the teacher shifts the focus of interaction from the current content-related pedagogic goal in order to focus attention on some aspect of the L2. They range in length from single turn constructional units (TCUs) through complete turns, to sequences comprising three or more turns. As described in chapter six, CLIL classroom interaction can be characterized in terms of a set of five micro-contexts, and the LFPs are always embedded in one of these. That is to say, the LFPs in the data never become a micro-context in themselves, but serve the wider interactional project, in which the shape of the micro-contexts reflects the teacher's content-related pedagogic goals. In this sense, it is of analytic interest the skill and competence shown by the teachers in shifting the focus in and out of aspects of the L2 while keeping the larger pedagogic goal on track.

Of course, there is no reason why language, or more precisely, an aspect of L2 form or meaning, cannot become the main pedagogic goal and be realized through any of the five micro-contexts. For example, a teacher could set up a vocabulary activity in which the students worked on the meanings of a set of words or expressions relevant to a topic, or the teacher could decide to engage in direct instruction of any aspect of form, meaning or register of L2 items deemed necessary for teaching a topic. However, in spite of the fact that at least one teacher in the CoRe interview (see extract 7.3 above) claimed to use language activities to introduce topic-related vocabulary, there was no evidence of use of instructional activities focused on the L2 in the corpus of classroom lessons. Wherever the L2 momentarily became the focus of attention, it was always easy to identify the larger interactional project it was embedded in, and this could be described in terms of one of the five micro-contexts.

That said, LFPs were a fairly frequent phenomenon in the classroom interaction in the corpus overall. There was a total of 108 LFPs in the 12 lessons, working out at an average of nine per lesson. As each lesson consisted of about 45 minutes' effective on-task time, this worked out as an average of one LFP every five minutes. Interestingly, the LFPs divided almost equally between the proactive, in which the teacher highlighted some aspect of L2 form or meaning without responding to any

previous turn by a student, and the reactive, in which the LFP was either an evaluative response to a previous student turn, or a response itself to a student query. Thus, there were 55 proactive LFPs in the corpus, and 53 reactive LFPs, showing a practically equal distribution between a focus on the L2 as a curriculum concern and as a matter of competence. The reactive LFPs are dealt with in chapter eight. In this chapter, the focus is on how the teachers proactively shifted attention to aspects of the L2 in classroom interaction, which aspects they attended to, and how this was accomplished interactionally, as a matter of their own L2 interactional competence.

7.3.1 Overview of proactive LFPs in the corpus

The proactive language-focused practices described in this section have broad similarities with what Ellis, Basturkmen and Loewen (2001) describe as 'preemptive' focus-on-form episodes (FFEs), in which teachers or students choose to make specific L2 forms a topic in classroom interaction. In communicative activities, just as in content-based or immersion classrooms, teachers and learners are in the roles of users of language as a tool for communicating meaning, rather than the students being in the role of language learners. In such meaning-focused contexts, L2 forms can become the focus of the discourse for two main reasons: there may be some 'trouble' in communication that needs to be repaired through a process of negotiation of meaning; or the teacher or a learner may decide to draw attention to a particular form-meaning relationship with the objective of learning about it. The LFPs found in the corpus of CLIL lessons were of the latter type, that is, on 'proactive' or 'preemptive' language-focused practices (LFPs) in which (in this case) the teacher decides to shift attention to some aspect of the L2 presumably with the objective of checking that the students know the item and filling in any gaps in their knowledge (often to facilitate a content-related activity). These practices, and the resulting interactional epsiodes, share the chracteristics that Ellis *et al*. (2001) identified for similar practices in communicative classrooms. LFPs, then,

1. occur in discourse that is primarily meaning centred
2. are observable (i.e., occur interactionally)
3. are incidental (i.e., not preplanned)
4. are transitory

5. are extensive (i.e., several different forms are attended to in the context of a single lesson)

Ellis et al. 2001: 411-12 (slightly adapted)

What distinguishes the type of proactive LFPs in this study from Lyster's notion of a proactive strategy in counterbalanced instruction relates to points 3 and 5. Although the notion of being preplanned is complex (how do we know if an LFP is *not* preplanned?), in this study there was no evidence that the L2 items which were focused on had been identified beforehand for treatment in this particular lesson or activity. They are clearly 'extensive' in that a number of different form-meaning relationships can become the focus of attention. There is no repeated treatment of the same forms. It thus turns out that the kind of 'proactive' strategies proposed by Lyster for content-based instruction represent more a focus on formS approach than a focus on form one (Long 1991). In fact, as seen in chapter three, immersion researchers such as Swain and Lyster have been critical of the 'incidental' approach to language forms which is characteristic of a 'focus on form' approach and of much immersion/content-based teaching, and indeed as indicated above, Lyster (2007) recommends that immersion teachers use controlled practice activities as part of a proactive strategy to give learners intensive exposure to recalcitrant L2 forms.

Before describing the teachers' LFPs as interaction, an overall picture of the types of items selected for proactive attention and the aspects of them focused on will provide some context. It will be recalled that in the CoRe interviews, the teachers, in their descriptions of their proactive practices, focused almost exclusively on vocabulary. This tendency is confirmed in their classroom interactive practices, with almost all of the 55 instances of attention to language focusing on vocabulary. As can be seen in table 7.1, these items were almost evenly divided between subject-specific terms and more general vocabulary, with a smaller set of items representing vocabulary related to classroom procedures and tools. In terms of which aspects of the L2 were attended to, table 7.2 shows that by far the majority of the LFPs focused on referential meaning only, while a few focused on multiple aspects (meaning, form and/or register), and a small group paid attention to formal aspects only (pronunciation or morphology).

Vocabulary type	Number of LFPs
Content-specific	21
General	25
Procedures/instruments	9

Table 7.1. LFPs by vocabulary type

Aspect of L2 item attended to	Number of LFPs
Referential meaning only	41
Form only (pron, morph)	4
Multiple (meaning, form, register)	10

Table 7.2. LFPs by aspect of L2 attended to

In terms of the micro-contexts in which the LFPs were embedded, there was a fairly even distribution between the direct instruction, task-setting and task checking and feedback micro-contexts, as can be seen in table 7.3.

Classroom micro-context	Number of LFPs
Direct instruction	17
Task-setting	15
Task-checking and feedback	22
Task-based activity	1
Orienting learning	1

Table 7.3. LFPs by micro-context

This shows that shifts to a language focus could be orchestrated by teachers in the service of a range of pedagogical goals. LFPs were almost equally likely to appear when teachers were setting up activities, leading feedback on them or carrying out direct instruction. Interestingly there were no clear patterns or alignments between the types of item focused on and the micro-contexts. For example, the LFPs which appeared in the direct instruction micro-context were almost equally divided between content-specific and general items (9 and 8 respectively), and in the task-setting micro-context, only 6 of the 22 LFPs attended to procedural/instrumental vocabulary items.

7.3.2 Interactional organization of proactive language-focused practices

The analysis of the teachers' proactive language-focused practices draws on Koole's (2010) work on epistemic access in mathematics classes. Koole identifies two main types of interactional practice by which teachers work on learners' access to knowledge. Teachers can produce explanations, which require from students displays of understanding, either during the ongoing explanation in the form of acknowledgement tokens such as 'hm hm' or positive or negative responses to 'do you understand' type questions, usually at the end of the explanation. Alternatively, teachers can work on learners' knowledge states by engaging in question-and-answer dialogue. In this context, what learners are expected to produce are claims or demonstrations of knowing, rather than simply indicating whether or not they understand. As will be seen in the following analyses, these two methods of establishing epistemic access are fundamental to content-based teachers' language-focused practices or LFPs.

Thus, in the interactional organization of the proactive LFPs, there was a clear division between two types of sequence: those in which the teacher elicited displays of knowledge from the students (elicitations), and those in which the language-focused information was offered directly to the students in the teacher's turn (explanations). Elicitations could be combined with explanations, with a student's claim or demonstration of knowing followed by an explanation by the teacher. Within these types, there was a wide range of practices in which different types of information could be elicited or explained, such as L1 or L2 translations, synonyms, metalinguistic information, definitions, names, or formal aspects such as spelling, pronunciation or morphology. These practices will be exemplified in the data extracts analysed in the rest of the section.

When teachers initiated a proactive focus on an aspect of the L2 by eliciting information, they did so by projecting for the student's next turn a display of knowing the answer. This could be done by 'do you know' or 'do you remember' type questions, which project the student as having known prior to the question (Koole 2010). This could be accompanied by appeals to previous learning, that is, what could be described as an intertextual reference to previous classroom talk and texts that had been shared or

by appeals to memory and the labelling of the item with a metalinguistic label, such as 'word', as in this example from a history lesson:

(7.16) HISTLSN2

```
 1   T:    okay so very good okay
 2         so Jesus Christ (.) which ↑way
 3   S1:   with the halo and the cross at the bottom
 4   T:    very good now Lucía say again the
 5   S1:   with the hand-
 6   T:    in a special position blessing (.) all ↓right (.)
 7         blessing because he's blessing blessing (.)
 8         do you remember the word ↑blessing
 9   S1:   yes
10   S2:   uh yeah
11   T:    bless (.) blessing
```

In this example, the teacher elicits a display of knowing by asking the students if they remember the word (line 8), thus constructing their current epistemic access as a product of previous learning. In this case, two students provide claims (not demonstrations) of knowing, and the teacher closes the LFP by repeating the word 'blessing' before carrying on with the main interactional business of the current micro-context. However, closing an LFP with just a claim of knowing was a rare occurrence in the data, which confirms Koole's (2010: 207) finding that teacher questions which ask students to display knowledge prefer a demonstration of knowing, not just a claim. Thus, claims of knowing rarely closed LFP sequences, but were followed by questions which upped the epistemic ante, by asking for demonstrations of knowing, as in this example from a grade 7 biology lesson:

(7.17) BIOLSN1

```
 1   T:    I'm gonna give you about two minutes time no more
 2         so you better think about that question
 3         write it down (.) and then (1.2)
 4         that is the question you're supposed to answer
 5         ↑okay write your answer here okay (.)
 6         >listen listen listen<
 7         does everybody understand the words ↑helpful?
 8   S:    yes
 9   T:    ↑harmful?
10   SS:   [yes
11   SS:   [no
```

12 T: can anybody tell me what to be (1.1) harmful
13 ↑mea:ns?
14 S: that damage
15 T: it damages yeah produces damage ↑okay
16 how do you say harmful in ↑Spanish
17 SS: (dañinas)
18 T: dañinas (.) o perjudiciales
19 mm how about helpful (.)
20 can anybody tell me what helpful means
21 (1.2)
22 S: that helps the body to
23 T: yes (.) it is something good ( ) good ↑okay
24 so how d'you say helpful in ↑Spanish
25 S: (bueno)
26 T: útiles beneficiosos ok ↑yes
27 S: in the thinking pad ( ) a word or a ↑picture
28 T: no you don't have to draw anything
29 you have to answer with words
30 with sentences ↓okay ↑okay

This extract clearly comes from a task-setting micro-context, as can be seen in lines 1-5 where the main interactional business is giving instructions for the task the students are going to do. However, there is a shift at line 6, clearly signalled by the teacher's speeded up repetition of 'listen' to a focus on an aspect of the L2, in this case the meanings of 'helpful' and harmful'. This is done, in the first instance, by the teacher, at lines 7 and 9, constructing her turn in such a way that the students could 'get away with' a claim of knowing. However, and the ambivalent responses (see lines 10 and 11) may have something to do with this, the teacher switches at lines 12-13 to an upgrading of the epistemic requirement by now projecting a demonstration of knowledge, by asking directly what 'harmful' means. At line 14, a student responds by producing a demonstration of knowledge, in the form of a synonym. The teacher, at line 15, produces an evaluative third turn in which she accepts the student's offering, but then goes on to initiate another adjacency pair in which she again projects a knowledge demonstration as the appropriate second pair part, this time in the form of a translation into L1. Again, one of the students successfully supplies the required demonstration of knowing. The whole process is then repeated, following the same sequence organization, with the word 'helpful' from lines 20 to 26. We can thus see, in this extract, how the teacher uses adjacency-pair based sequence organization to skilfully shift into and out of LFPs within a task-setting micro-context. From lines 28-30, we can see how she responds to a student's query about the task, and gets on with the business of the task-setting micro-context at hand. It is also worth noting the students'

interactional competence here, as it is a student who shifts the focus back to the main business of the micro-context with the question at line 27.

Elicitations of demonstrations of knowing LFPs took a wide range of forms, particularly in the types of knowledge about the language items that could be displayed. Two main strategies could be found in the data: the teacher could ask for the meaning of the word or expression, leaving it open how the student demonstrated knowledge of this meaning; or the teacher could project the way in which the student was required to demonstrate knowing by asking more specifically for a translation or explanation, for example. Extract 7.18 shows a teacher using both strategies in a first year technology lesson:

(7.18) TECHLSN2

```
 1   T:   eh:: (1.8) could you try (and write) Álvaro
 2        to label this: (.) paragraph this text
 3        label (.) DO YOU KNOW WHAT LAB-
 4        DO YOU KNOW WHAT I MEAN WHEN I SAY ↓LABEL
 5   S:   ↑introduction
 6   T:   em how do you say label in- Carlos (.) in Spanish
 7   S:   ↑label eh (              )
 8   T:   no ↓label (.) label es
 9        ((writes 'label' on board))
10   S:   (              )
11   T:   label es
12   S:   (                  )
13   T:   etiqueta
14        ((points at student))
15   S:   etiquetar
16   T:   and I say ↑sometimes (I tell)
17        label a certain text we say (.)
18        as you were taught in this training ↑course
19        you say marcadores
20        to know what the text is about ↑okay
21        you ↓label it
```

This is a task-setting micro-context in which the teacher is giving instructions for something students have to do when they read part of a text. They are supposed to label or mark it in terms of which part of the text it is, for example, the introduction. At lines 3 and 4 the teacher's LFP projects a display of knowledge - the meaning of 'label'. Interestingly, this does not succeed in shifting the student's attention away from the

learning task at hand to a focus on language, as the student, at line 5, provides a candidate answer to the content learning task itself, thus demonstrating understanding of the word 'label' already. In spite of this, the teacher continues with his LFP, at line 6 projecting a more specific knowledge display in the form of an L1 translation of 'label'. At lines 8 and 11, the teacher interactionally primes the expected code switch in his turn design by using the Spanish verb *ser* (label *es*) thus showing that the provision of a translation involves not just producing an individual word but involves code switching at clause level as well. The student's turn at line 12 is inaudible and it could be that the word 'etiqueta' was produced, but in any case the teacher provides the translation himself at line 13. Interestingly, it is a student who provides a more appropriate translation, the verb 'etiquetar' which more accurately represents the way 'label' was first used in the sequence - as a verb (line 2). From lines 16 to 21 the teacher effects a transition back to the main focus of the interaction in this micro-context, making sure that students know how to label a text.

Teachers also used elicitations of demonstrations of knowing in ways that could place more interactional demands on the learners by, for example, asking them to produce an explanation or definition of a word or expression. In this example, from a fourth year biology lesson, the teacher focuses the class's attention on the meaning of the important content-related term 'inherited':

(7.19) BIOLSN2

```
 1   T:    think a little ↑bit (.) think a little bit
 2         of all the features that you've ↓got (.)
 3         okay you've got this
 4         this is a feature you see the ↑word (.)
 5         features in the list belo:w (.) into your table
 6         so what features do we ↓have
 7         we have hair color
 8         we've already talked ↑about
 9         is it focused is it ↑okay
10         (1.2)
11         can you see ↑properly
12         so we've got the hair color
13         we've got we've got what else
14         we've got the the eye color
15         those are familiar to you ↓already (.)
16         aren't ↓they(1.3)
```

```
17          ↓okay (.) and then there are others
18          being good at maths weight height
19          features that are ↑inherited
20          what does to be inherited ↓mean
21          (0.8)
22    S1:   [heredado
23    S2:   [the
24    T:    yes but now give me an explanation (.) Celia
25    S1:   the-
26    S2:   that your parents have the same-
27          shared the same characteristics  (          )
28    T:    yeah well they have passed that characteristic
29          on to you through the ↓genes ↑okay
30          okay so this is to be filled in with ↑features
31          that are ↓inherited
32          this is to be filled in with ↑features
33          that are ↓<environmental>
```

This is another clear example of a task-setting micro-context. The teacher is setting up a task in which the students have to work in groups to decide if certain traits or characteristics are inherited or environmental and fill in their answers on a table, which she is projecting on a screen. At line 20, her turn projects a demonstration of knowing in the next turn, but without specifying which form this knowledge should take. At line 22, S1 provides what is frequently sufficient as a second pair part for a demonstration of knowing elicitation - an L1 translation. However, the teacher, in her evaluative third turn, upgrades the epistemic requirements by accepting this at line 24, but then going on to elicit a much more demanding display of epistemic access - an explanation. At lines 26-27 S2 provides her explanation, and this is partially accepted by the teacher at line 28 ('yeah well') and then reformulated in more 'scientific' terms. At line 30, the teacher deftly switches the focus back to the main business underway in this micro-context - clarifying how they have to do the task. It is interesting to note here that an item of content-specific language can become the focus of attention in a context in which conceptual content is not the prime focus of attention. All the micro-contexts are potentially available for a spontaneous and opportunistic proactive language focus, as part of the ongoing classroom business of checking that there is sufficient mutual understanding for tasks to be carried out expeditiously.

The other main type of LFP through which teachers shifted attention to aspects of the L2 was explanations, in which they directly offered information about a word or

expression as part of their own ongoing turns, without involving the students in any displays of knowing, although displays of understanding could occur. As with the elicitation LFPs, these practices were often used in combination, so that one language-focused sequence within a micro-context could reveal a range of different actions through which teachers shifted learners' attention momentarily to aspects of L2 meaning or form. Two examples, one from a biology lesson, and one from a technology lesson, are typical examples of LFPs in which teachers shifted attention to L2 features by offering explanations during their ongoing turns, that is, without involving learners in elicitation sequences. The first example is from a first year technology lesson in which the teacher is giving instructions about what tools to use in making a wooden toy:

(7.20) TECHLSN2

```
 1   T:    if you are just on that machine
 2         you wait for them to use it to finish (.)
 3         in the meanwhile you will
 4         use these coping saws.
 5         ((takes coping saw from wall and holds it up))
 6         saws you say es ay double u
 7         this is to saw serrar o la sierra
 8         the tool is called saw as well
 9         see saw saw see saw seen
10   S:    yes
11   T:    saw es vio es ((Sp. is saw is))
12         as well serrar  ((to saw))
13         you can use these tools as well
14         [you must
15         [((returns coping saw to wall mount))
16         [this is very simple I will finish in a minute
17         [((picks up and holds down clamp for saw))
18         you must tighten
19         hold the piece of wood ↑here (0.3)
20         ((fixes clamp to one group's table))
21         and then you saw it ↑okay
```

From lines 1-5 it is clear that we are in a task-setting micro-context. The teacher is giving instructions about which tools to use, in this case a coping saw. He is helped in this task by having a saw available, which he uses to illustrate not only his task-setting activity, but also the LFP which takes up lines 6-12. It begins at line 6 by the teacher using a frequent technique to highlight a language item as just that - a *language* item. This is done by the use of 'you say' in his turn, which serves to signal that we are

moving into an LFP. He follows this by giving further information about the item - its spelling. At line 7, his use of 'this is' is an example of another frequent practice in explanation LFPs, where it is used to preface metalinguistic information or translation. In this case he adds a turn construction unit in Spanish, giving both the verb and noun forms. At line 8, the noun form is reinforced by another frequent practice, the use of 'is called' to name the object/idea in question. The addition of 'as well' adds metalinguistic information - the same form has two meanings in English. At line 9 he adds yet another layer of metalinguistic information, the different forms of the verb 'see', and continues at lines 11-12 by using another practice, that of giving L1 translations of the L1 item highlighted. His turn design is interesting here in terms of code-switching, in that he places the L2 item as subject in an L1 clause (saw *es vio*). He also adds L2 'as well' to an L1 clause (*es* as well *serrar*). At line 13 he smoothly picks up again the task-setting micro-context by switching attention to content-related matters - which tools the students can use. Thus we see a rather complex example of an explanation LFP embedded in one micro-context, and the ways in which the teacher skilfully manages these shifts in attention.

The second example of an explanation type of LFP comes from a fourth year biology lesson in which the teacher, in a direct instruction micro-context, is using students' observations of each other's physical characteristics to introduce the idea of genetic variation:

(7.21) BIOLSN2

```
 1   T:   for instance the characteristic eye colour
 2        or hair (.) colour hair type (.)
 3        curly or straight (.) okay
 4        his is straight hers is curly (1.0) okay?
 5        yours is (.) straight.
 6        (0.8) yours is? let's see
 7   S:   curly=
 8   T:   =slightly curly and yours  [quite straight.
 9   S:                              [(         )
10   T:   okay so we've got okay so characteristics?
11        ((writes on board))(2.2)
12        can you see properly?
13        ((writes on board)) (3.4)
14        is the same as (.) traits,
15        ((writes on board))(2.5)
16        or you can also say features.
```

```
17          (1.6)
18          this is English okay?
19          so any characteristics (     )traits or features
20          you might (.) find the three words when reading
21          or or when (1.0) studying in English (.) right?
22          so wh- what features were you talking about?
23          (1.2)
24          what feature what trait were you talking about?
25          (1.4)
26    S:    the type of hair
27    T:    good the type of hair
28          whether the hair is curly (     )
29          or straight. ok <so that's another trait.>
30          so we've got (1.5)
31          we've got colour, hair type, hair and then we-
32          yesterday we had colour
33          so- those are traits
34          that can be seen can be seen (.) right?
35          but (.) can you think of any traits?
36          (1.2) of us (.) humans (0.5) that might
37          differentiate us (1.4)
38          >but that we cannot see< on the outside?
39          (1.8)
40    S:    DNA
41          (1.0)
42    T:    well DNA is not a trait.
43          DNA is a ↑molecule (.)
44          that contains the ↑information (1.4)
45          to get all possible traits.
```

At line 10, the teacher moves into the LFP by turning to write on the board and saying 'characteristics' with a rising intonation. Until then, the class had been in the direct instruction micro-context talking about the topic of different physical features such as eye and hair colour. From lines 10-16 the teacher uses the strategy of giving synonyms, not just to explain the meaning of the word 'characteristics' (which, as it is very similar to the L1 word, would be easy for the students), but to make available a wider repertoire of (perhaps more difficult) L2 terms with a similar meaning that they would be likely to encounter. At line 18 there is a very clear metadiscursive indication of the fact that we are in an LFP. It serves to help the students 'navigate' the discourse by signalling that the ongoing micro-context has been momentarily put in brackets by the LFP. At lines 20-21, she provides further information about these words, in fact highlighting an aspect of register or subject-specific literacy - these are words they are likely to encounter in reading on biology topics. At line 22 we can see another example of a smooth transition from the LFP back into the ongoing micro-context. However, at line 24 we have an

example of another language-focused practice, that of reprising items focused on in LFPs within the content-related micro-context. That is, by highlighting 'feature' and 'trait' (and not 'characteristic') in the content relevant question, the items are reinforced in a meaningful context. We are no longer 'doing English' as at lines 18 and 20-21, but doing biology. This is further reinforced by the way in which the item 'traits' is taken up in the adjacency pair initiated at line 35, where 'traits' is being used exclusively in 'content' mode. Significantly, the teacher's evaluative third turn beginning at line 42 is no longer concerned with the referential meaning of 'trait' as an L2 vocabulary item, but with conceptual understanding, i.e. that DNA is not a trait. Thus we can see both the teacher's and the learners' interactional competence as attention shifts in and out of a focus on L2 meanings and the conceptual content being focused on in this direct instruction micro-context.

7.4 Chapter summary and conclusion

In this chapter, the focus has been on the teachers' knowledge, thinking and practice in relation to language as a curriculum concern. Two main sources of data were used: representations of knowledge of language as elicited at the preactive stage of teaching a unit in the CoRe interviews, and a collection of the teachers' language focused practices (LFPs) in which they addressed language issues proactively. The analysis of the CoRe interviews showed that the teachers were somewhat ambivalent in their representations of language as a curriculum concern, with a pattern in the interaction being an initial negation that language was a curricular focus followed by mitigating statements identifying ways in which attention was paid to language. Certain interactional phenomena in the teachers' descriptions, such as turn design in which a lack of focus on language was presented as an apology, and more direct references to institutional or programme factors, were a strong indication that this ambivalence towards attention to language as a curricular concern reflected contextual constraints and tensions within the programme itself. These constraints included the fact that the teachers have a crowded syllabus to get through, and the possible criticism from colleagues and/or parents that the bilingual students were learning less of the curriculum content than their non-bilingual peers.

In terms of classroom practices, there was consistency with the descriptions of practice in the CoRe interviews in that the focus on vocabulary was confirmed in their LFPs, with almost all the examples focusing on vocabulary, with these generally focusing on referential meaning. LFPs were quite evenly distributed among the different micro-contexts, with a language focus almost equally likely to appear whether the pedagogic focus was on setting up activities, giving feedback or carrying out direct instruction. LFPs were organized in two main types of sequence: teacher elicitations of displays of knowledge from the students, and explanations by the teachers of language-focused information. Teachers often combined practices which first involved the elicitation of claims of knowing about an aspect of the L2 which were followed by more demanding elicitations of epistemic access, in the form of demonstrations of knowing.

What most stands out from the analyses is the degree of interactional competence displayed by both teachers and students as the interaction shifted in and out of the main business of the ongoing micro-context and these generally quite short sequences in which teachers carried out LFPs. Normally, it was the teacher who was responsible for shifting the interactional focus, but we have seen that sometimes the students did this as well. Thus, both parties in the classroom talk are alert to micro-shifts in focus as the main classroom business 'pops down' to a level where language is a focus and then pops back up to the main micro-context.

Overall, the chapter provides evidence to justify the disquiet expressed by some researchers (see chapter three) about a random or incidental focus on language in CLIL or other content-based classrooms. While teachers and learners showed considerable interactional competence in handling shifts of focus to language-related matters, there was no evidence of any sustained and principled pre-selection of language items, whether related to content topics, or the students' needs for L2 development. Language, or more precisely, L2 English, remained a 'diffused curriculum concern', with its role in the curriculum and in teachers' planning and teaching practices under-specified. When language did come up in the teachers' accounts of practice, it was at the level of vocabulary, usually subject-specific terms. In their classroom practices, vocabulary was the main focus of attention of LFPs, but attention was almost evenly divided between subject-specific and more general vocabulary items. Grammar was largely missing from both the teachers' descriptions of practice and their actual practices. Neither was there

any significant focus on language beyond the sentence, discourse, as a curriculum concern, with no attention to the L2 as an aspect of subject-specific literacy, in the form of genres or registers. When the teachers talked about 'texts' they did so in terms of lexis. It seems that 'language' as a curriculum concern for these teachers is largely a matter of lexis, subject-specific in their pre-teaching accounts of practice, but more evenly divided between subject-specific and general vocabulary in their classroom practices. It remains to be seen whether a similar approach is taken when the teachers respond reactively to students' displays of (in)competence, and how this relates to the ways in which they 'construct' the students in their descriptions of practice. This is the topic of the next chapter.

Chapter 8. Language as a matter of competence in the teachers' knowledge, thinking and practices

8.1 Introduction

This chapter presents the findings on the four teachers' knowledge, thinking and practices in relation to the third perspective on language, that is, language as a matter of competence. This perspective on language maps onto the third dimension of teacher language awareness (TLA), that of language from the point of view of the learner's L2 development and ability to cope with the linguistic aspects of content topics and tasks. The chapter thus addresses the last two research questions:

5. How do the teachers 'construct' the learners in terms of their linguistic competences?
6. How do the teachers respond reactively to learners' displays of linguistic (in)competence in classroom interaction?

In addressing question five, the analysis draws mainly on data from the CoRe interviews. In these interviews, the teachers 'constructed' the learners in different ways in terms of their ability to cope with the linguistic demands of dealing with content topics and activities. To address question six, LFPs in which the teachers responded reactively to students' displays of (in)competence are analysed. These reactive LFPs are then sub-divided into those in which the teacher responded in a follow-up move to repair an aspect of L2 production in the learner's previous utterance, and those in which the teacher responded to a query from the learner, often in the form of a request for the L2 form of a Spanish word or expression. In both cases, the LFP is reactive, as it is a response to a learner's previous utterance, in the form of an evaluative third turn in the first case, and in the form of a second-pair part of a question-answer or request-compliance adjacency pair in the second case. The analysis describes the sequential organization and turn design of the LFPs, and also shows how they are embedded in whichever classroom micro-context is in operation. That is, as in all the examples of LFPs found in the corpus, the main 'business' going on was some aspect of content teaching, and the LFPs were usually brief shifts of interactional attention before

continuing with the content-related micro-context activity. As with the analysis of proactive LFPs in the previous chapter, a focus of the analysis is the interactional work carried out mainly by the teachers in shifting the focus of attention into and out of these language-focused sequences.

8.2 Teachers' 'constructions' of the learners' L2 competence

As discussed in chapter three, the third perspective on language is that of the L2 as a matter of competence. The main focus here is of course on the learners' L2 competence. The teachers' own L2 competence did not appear as a topic in the CoRe interviews, but did so to a limited extent at the postactive reflective stage, as was seen in the analysis of extract 6.12. In terms of language awareness, this dimension refers to the teachers' knowledge and thinking about language from the learners' perspective, including their stages of L2 development and their ability to cope with the demands of learning the content and participating in classroom activites. Descriptions of learners' competence appeared in both the preliminary phase of the CoRe interview, in which the teachers talked about their practices in general, and in the main phase where they described how they would go about teaching the specific topic they had chosen.

In the teachers' representations of practice in the CoRe interviews, the L2 as a matter of learners' competence emerged in two main ways. First, it emerged in assessments of the overall competence of the learners. That is, what they were capable of in different aspects of linguistic competence or in different situations, such as understanding explanations or participating in activities. Secondly, it emerged in the teachers' descriptions of how they responded to students' errors. It thus falls under the 'reactive' attention to the L2 in Lyster's (2007) framework. In the rest of this section, the findings on the teachers' representations of the L2 as a matter of learners' competence are organized according to these two broad dimensions, beginning with the teachers' overall assessments of the learners' competences in various aspects of using the L2 as a medium of learning.

8.2.1 Teachers' representations of learners' L2 English competence

In their representations of practice in the CoRe interviews, the teachers produced assessments of their learners' competence in using the L2. They produced both positive and negative assessments, and these covered a range of different aspects of L2 competence, such as using English in a range of situations and for discussing certain topics, different abilities according to age or grade level, or in different skills or areas of language use. Two of the teachers made distinctions between their learners' levels of competence in different social situations. The technology teacher distinguished between his learners' ability to use the L2 in the classroom and in the technology workshop. He first positively assesses their L2 use in the classroom:

(8.1) CoReINT2

```
 1   T:    I can do the lessons very well in the classroom
 2         because the language we use
 3         the teacher and they use in the classroom
 4         it's quite limited (.)
 5         I mean I don't have to explain
 6         I'm using all the time more or less the same
 7         sentences
 8         more or less the same things (.)
 9         I don't know how to explain
10         but the language is limited
11         it's a certain language that you use in the
12         ↓classroom
13   I:    hm mm
14   T:    so no they can use the language very well
15         they don't find I don't think they find any
16         problem
```

Here, the teacher attributes this competent use of the L2 in the classroom to the fact that the language used in the classroom is 'limited' (lines 4 and 10), and that the same things get repeated (lines 6-8). He produces a categorization of this language as a kind of special classroom code (lines 11-12), possibly a more restricted and limited variety. In itself, this is an interesting and significant categorization, as this teacher's construction of the nature of classroom language contrasts with other views, which would see it as a rich environment for L2 use and acquisition. This teacher contrasted the relative ease with which his learners were able to use the L2 in the classroom with the difficulties they experienced when using it in the workshop, in the process of making a wooden toy:

(8.2) CoReINT 2

```
 1   I:    to the toy um um have you noticed
 2         when you were teaching this before
 3         any kind of language problems
 4         the students might have
 5         in dealing with this topic
 6         I don't know maybe describing the process
 7         describing the previous ideas
 8         are there any difficulties
 9         [they might have
10   T:    [yes yes when they have yes
11         quite a lot of difficulties
12         when they have to explain to me
13         they don't know even-
14         actually they don't know very well
15         how to do the toy they imagine
16         ok they have even in Spanish
17         but in Spanish they don't have
18         the  (            ) of the language
19         so teacher I have to
20         I want to put this thing here whatever
21         or this thing here
22         and I want the leg to move this way
23         and it's very difficult to explain
```

The sequence took place in the phase of the CoRe interview in which the focus was on teaching the specific topic. It shows how richer representations can be elicited when the focus is on the teaching of a concrete topic, rather than on more general constructions of classroom practice. In this sense, the question asked here at lines 1-9 has an important role to play in the elicitation of the teacher's response. The teacher makes the point that using language in the workshop to explain what they want to do in making the toy would be challenging even in the L1, Spanish, (lines 16-18), and is thus even more challenging in English. At lines 19-22 he quotes examples of what the learners might want to say, giving them as examples of the difficulty in explaining what they want to do (line 23).

This teachers' orientation to the variability of the learners' L2 competence according to situation is also shown in his description of the difficulties they have in using English in tutorial lessons:

(8.3) CoReINT2

```
 1   T:    er I'm I'm tutor how do you say with
 2         I've got guiding lessons I've got guidance lessons
 3         you say so
 4   I:    hm
 5   T:    every week that the language we handle those days
 6   I:    hm mm
 7   T:    is out of these limits I'm talking to you
 8   I:    hm mm
 9   T:    it's completely different
10         quite personal quite I don't know (.)
11         they want to explain to me
12         to talk to me about their problems
13   I:    in English?
14   T:    um I'm trying to do it in English
15         I'm talking to them all the time in English (.)
16         but sometimes that's sometimes (0.2)
17         there are things that are very very important for
18         them (.) teacher there's another guy who's not
19         bullying but telling me things and stealing me the
20         things and kidding with my pencil case and so on.
21         and that's so important and I don't want them to
22         I want them to feel free to talk to me in Spanish
23         and they know when they have to talk to me in
24         Spanish and explain to me those kind of things
```

Here, in the teacher's description, we can see variation in both setting and topic. In terms of setting, the tutorial period is a setting in which the language use exceeds the limits he had identified earlier. This is related to the kinds of topics discussed, in that learners will want to discuss problems and issues of a personal nature, such as when another pupil may be bothering them (lines 18-20). This orientation to the variability of the students' competence or willingness to use the L2 in different situations is shared by the history teacher, who also mentions tutorial periods in this respect:

(8.4) CoReINT 3

```
 1   T:    yes from the moment I enter the class
 2         everything is in English (.)
 3         if they want to go to the toilet
 4         or someone has lost a pencil or ↑whatever anything
 5         (.) they have to tell me they have to tell me in
 6         English and in this institute this is from the
 7         beginning in primero
 8         so in the beginning the first week perhaps
 9         some of them try to speak Spanish
10         or try to tell us something (.)
11         and sometimes even in the corridors
12         when they meet us in the corridors to say hello
```

```
13          or can I ask you a question or where is Mr –
14          so they ask the things in ↓English
15          we try to do that from the beginning.
16    I:    a lot of people in other schools
17          would like to know the secret of that.
18          how do you manage that
19          I have seen it in this school.
20    T:    just be a little demanding with that
21          because from the beginning, tell me in ↓English
22          the first year I came here I was the tutor of a
23          class and I taught them Geography and History also
24          but every time in English,
25          but the problem was that I wanted to follow the
26          tutorial classes in English also
27          but you know that here in Spain
28          tutorial classes are now all week
29          and they got lots of complaints
30          and things they want to do or they refuse that
31          being in English
32          because there were personal problems
33          and it was something related with their feelings
34          so it was very difficult for them to express that
35          because they were used to speaking,
36          in History they have got that use but no,
37          tutorial they didn't want to.
38          they asked me that they wanted to have tutorials
39          in Spanish.
```

In the first discourse unit (lines 1-15) the teacher builds a description of L2 use in at least two situations (classroom and in the corridors) and for a range of purposes, such as expressing basic individual needs (lines 3 and 4). However, in the second discourse unit (lines 20-39) she describes the 'problem' of wanting to hold the tutorial lessons in English. Her description here echoes the technology teacher's, in that she alludes to the difficulty in using the L2 to talk about 'personal problems' and 'feelings' (lines 32-34).

Another situational factor which impacted on the learners' L2 use was whether they were working with the teacher in a whole class situation or in groups. Here, the technology teacher describes how his learners were well able and willing to use English when addressing him, but more reluctant to do so when speaking to each other:

(8.5) CoREINT2

```
1     T:    (...) they are quite used to talk to me
2           to talking to me in English
3     I:    mm hm
4     T:    asking me everything in English
```

```
 5          but to each other in the team
 6   I:     mm hm
 7   T:     it's very difficult to make them speak in English
 8          It's very very difficult
 9   I:     do you- are you successful?
10   T:     not so much of that no no no
11   I:     hm
12   T:     no it's very difficult they are friends
13   I:     yeah
14   T:     they know each other since they are three
15          sometimes three four years old
16          and it's very difficult
```

While the students' reluctance to use English when working in groups may be seen more as a matter of willingness than of competence, it is clear that competence is relevant in the description of the learners' being 'quite used' to talking in English and 'asking everything' in English (lines 1-4) when addressing the teacher. The teacher attributes this reluctance to a contextual factor inherent in the social setting: the students are friends and have been together since infant school. This orientation to a contextual factor which impacts on expectations for L2 use is a clear example of how practical knowledge of context inter-relates with knowledge of language in this teacher's representation of practice.

Apart from the interaction format (e.g. whole class or groups), the demands of the type of task or activity the students were doing was another situational factor which emerged in descriptions of variation in displayed L2 competence. The science teacher distinguished between tasks in which the students were asked to speak spontaneously, and those for which they were able to prepare:

(8.6) CoReINT1

```
 1   T:     you see (1.8) when it comes to talking
 2          as I said (0.8) eh (.) it's a little bit ↑more
 3          scary isn't it=
 4   I:     hm
 5   T:     I mean it's a little bit more scary
 6          cos they ↑know that they're not .hh (.) yet
 7          (0.6) very <fluent talking.> (0.8)
 8          although they might (0.8) get to be
 9          because whenever I- whe-
10          when  I ask them for instance
11          the other day (0.5)
```

```
12          we went to the computer room (0.4)
13          and they explained (.)
14          they had some presentations (.)
15          in the PowerPoint, about-
16          it was about geology (.)
17          about Alfred Wegner
18          and the continental drift  [(.) theory=
19   I:                                [hm
20   T:     =which was kind of literacy you know
21          I mean talking about (0.4) the ↑scientist
22          what he ↑did what evidence he came up-
23          he he put forward (0.2)
24          to:: support his theory or whatever
25          >so it was< pretty simple
26   I:     hm
27   T:     to to talk about something that was
28          kind of talking talking talking .hh (.)
29          and eh they they did very ↑well
30          (1.2)
31   I:      hm
32   T:     if they prepare it in advance, (1.2)
33          they do very well (.)
34          but if it's just on the spot (.)
35          they get a little bit more
36          .hhh (.) e::h hhh (.) eh scared.
```

At lines 32-36 the teacher rather neatly sums up this distinction. Earlier in the discourse unit, she uses a subjective evaluation to attribute the problems in speaking performance to the fact that they are 'not yet very fluent' (lines 6-7). This extract also stands out for the teacher's repeated use of the emotive terms 'scary' and 'scared' (lines 3, 5 and 36). In terms of language awareness in relation to learners, it constructs a version of classroom practice in which tasks which allow them to prepare reduce anxiety and allow the students to more freely produce spoken language.

Age, or grade level, was another factor present in the teachers' descriptions of the learners' L2 competence. Older learners were represented as having more competence in using the L2. In this extract, the science teacher attributes to the older learners the ability to cope with 'normal lessons' in the L2:

(8.7) CoReINT1

```
1    T:    =so I'm having older students
2    I:    mm
3    T:    then it's not that different you see
4          because they are already a little bit more mature=
```

```
 5   I:    hm mm
 6   T:    =grown ups so they are able to follow
 7         let's say normal lessons
 8   I:    hm hm mm
 9         (0.4)
10         what do you mean by normal lessons=
11   T:    =normal lessons I mean normal lessons
12         [heh heh heh
13   I:    [heh heh heh .hh
14   T:    I mean I mean that they are able to follow
15         explanations and ↓things
16         they- I don't have to to mm interact as much
17   I:    hm mm
18   T:    as I do with the little ones
19   I:    hm mm
20   T:    because of the language I mean (.)
21         I interact because of the science stuff
22   I:    hm mm
23   T:    you see not because of the language (.)
24         with the little ones
25         that I know their English is not as good
26   I:    hm mm
27   T:    then I have to kind of do a lot of
28         er language skills and things
29         focus a little bit more on language
30         than with the older ones
31   I:    yes
32   T:    because I think the older ones
33         eh their level of English is- is quite good
34         to follow lessons entirely in English
35   I:    hm mm
```

In terms of practical knowledge about language, this is a rich representation of how this teacher distinguishes between language and content-focused interactions. In her response to the question about 'normal' lessons, she explains that these are lessons in which she can focus on the science content (line 21), rather than interacting around language content as she does with the younger ones (lines 23-25). This teacher is explicitly differentiating between the younger and older students in terms of L2 competence, in her categorizations of their English being 'not as good' (line 25) or good enough to follow lessons entirely in English (lines 32-34). An interesting implication of this teacher's description here, and one which is significant for her practical knowledge construction, is that 'normal' lessons do not have an explicit focus on language, but are exclusively focused on the content.

This representation of the learners having different levels of linguistic competence at different ages was also a feature of the history teacher's description of the demands made on them when studying a history topic in the second year:

(8.8) CoReINT3

```
 1   I:    as you say as they get older
 2         it is getting more complicated (.)
 3         in what ways do you think
 4         the language is getting more complicated.
 5   T:    because its not enough (.)
 6         before they had to study art
 7         but when they are (.)
 8         when they were asked questions
 9         the questions were more simple.
10         for example I asked them
11         now look at these two sculptures
12         Greek sculptures
13         from which period are they from (.) why
14         characteristics (.) compare characteristics(.)
15         are they static
16         or are they from the classical period with
17         movement (0.3) so they were supposed to choose
18         one of these options
19         or write a sentence comparing the two ↓things
20         but only a sentence
21         it was much more simple
22         because they were not request
23         so much language,
24         because they were in primero
25         but now they are in segundo
26         so they need a little more vocabulary
27         little more (     ) to stress their own opinion
28         and their own analysis,
29         and only saying this one that one
30         or just click a box
31         or fill in with the words I have gave them before
32         so I am not going to give them in the exam
33         for example many clues (.)
34         they are supposed to think and express themselves
35         alone without my help in exam  (0.2)
36         so will be much open exam
37         where they have to start
38         to not only to know and to remember the content
39         but also to express themselves.
```

Although the teacher here builds her description in terms of increasing demands in the curriculum, the implication is that learners in the second year of secondary education (segundo) are expected to have a higher level of competence in using the L2 to meet these demands. They will need to have 'more vocabulary' (line 26), to produce their

own opinions and analysis (lines 27-28), and they will not only need to know the content, but to 'express themselves' (lines 34 and 39).

The teachers also differentiated between the learners' levels of L2 competence in terms of different language skills or areas. For example, the science teacher clearly distinguished between her students' receptive and productive L2 skills:

(8.9) CoReINT1

```
 1   T:   I mean they're good at (.) understanding (.)
 2        but they're not that good at talking
 3        or at ↓writing
 4   I:   hm mm hm mm
 5   T:   they're very good at listening
 6   I:   hm hm
 7   T:   and understanding
 8        they understand almost everything
 9   I:   hm mm
10   T:   it's amazing
11   I:   hm  mm mm
12   T:   when it comes to: talking they are-
13        they are they're very
14        there are big differences among them (.)
15        some students are very good
16   I:   hm mm
17   T:   some others (.) are not that ↓good
```

This discourse unit response is interesting in that it contains a number of subjective evaluations, or assessments, of the students' abilities. The description of the students' competences is built in such a way as to clearly distinguish two aspects of their competence: the ability to listen and understand, and the ability to produce spoken language. The first is evaluated very positively, with the use of extreme case formulations (lines 5 and 8), and the implication is that it applies to *all* the students. However, speaking skills are described as being quite differently distributed, with some students being better than others (lines 12-17). As will be seen in the following section, this teacher's overall lower evaluation of her students' productive language skills may be linked to her descriptions of the importance of correcting their output.

8.2.2 Teachers' representations of their reactive strategies to aspects of learners' L2 performance

As part of the CoRe interview, the teachers were asked directly if they corrected any aspect of the learners' L2 output. In their responses to this question, the teachers produced quite detailed descriptions of their practices, covering whether they corrected or not, what they corrected and why, and how they corrected. Three of the four teachers responded that they did correct their students' L2 production and were then asked to identify the kinds of things that they would correct. For example, the history teacher distinguishes between spoken and written errors:

(8.10) CoReINT3

```
 1   I:   what about when they make mistakes of any kind
 2        do you correct them,
 3        do you give them corrective feedback on their
 4        English?
 5   T:   yes yes always
 6   I:   what sort of things do you correct.
 7   T:   for example in oral mistakes at the moment
 8        if they pronounce badly a word
 9        because they don't know,
10        because it was their first time or whatever
11        I will always correct that (.)
12        and written exercises always.
13        I correct all the grammar
14        I told them this is badly done
15        this is not the right word sentence
16        the order of the sentences or whatever.
17        I correct that and past tenses also (.)
18        past participles or whatever.
```

In this teacher's construction of her reactive strategies, aspects of L2 production are related to the skills: pronunciation with speaking, and grammar with writing. It is noticeable that she script formulates this as a general aspect of her practice, and not a one-off or occasional thing she does (use of 'always' at lines 11-12). This amplifies the importance of providing corrective feedback in her representation of practical knowledge, as an integral aspect of her practice.

The science teacher also claims that she does correct, and, interestingly, makes a similar distinction between written and spoken work, although she highlights grammar, and not pronunciation, as what she corrects in the learners' spoken production:

(8.11) CoReINT1

```
 1   I:   do you ever um give them corrective feedback
 2        on their language?
 3   T:   yes I do
 4   I:   hm
 5   T:   yes I do I-
 6        whenever I ask them to do any::: writing,
 7   I:   hm hm
 8   T:   I always I always give them the correct(ed)
 9   I:   hm
10   T:   writing back sometimes I ask the American girls
11        for help (.)
12   I:   hm mm
13   T:   that's one of their tasks .hh and uh e::h I do
14        I always correct their their speaking (.)
15        I try to   [I try to
16   I:              [what aspects of their speaking do you
17        correct
18        [what what] mistakes do you-
19   T:   [I try to ] correct mmm as many as I can
20        because I think I think it's about time
21        that they are being correct (.) they are correct
22        (.) I mean because they they haven't been
23        corrected (.) very much you see throughout all
24        these years I mean at primary school I think they
25        never correct their erm their speaking.
26   I:   mm
27   T:   so they come with very: important uh significant
28        mistakes=
29   I:   mm
30   T:   =such as confusing the present tense with the past
31        tense and things like that.
32   I:   hm
33   T:   or or yeah or I don't know that kind of stuff u:h
34        an I'm not gonna s- to stand it any longer
35   I:   hm
36   T.   I mean not in fourth year not in third year (.)
37   I:   hm
38   T:   not even in the first uh   [year=
39   I:                              [hm
40   T:   =because I mean you can't say e::h
41        yesterday my mother tell me (.) no that's not
42        possible
43   I:   hm
44   T:   when you're twelve year old
45        and you've been learning in English fo:r ten=
46   I:   hm
47   T:   =years already
48        I mean yesterday my mother tell me (.) no
49   I:   hm
```

What stands out in this teacher's construction of her correction practices is the rather emotive tone. She builds her description in such a way that a sense of frustration emerges at the persistence of these students' basic errors even after having ten years of learning through English. At lines 20-21 she states that it is 'about time' that the students spoke correctly, and, at line 34 she expresses her unwillingness to 'stand it any longer'. Knowledge of context, as an aspect of practical knowledge, emerges here in the discourse with her attribution of this situation to the fact that the students were not corrected at primary school (lines 22-25). In another segment, this teacher goes further in attributing the practice of not correcting the students at primary school to a sensitivity about affective factors:

(8.12) CoReINT1

```
1   T:    because I think teachers in primary school
2         they just let them talk talk talk .hh (.)
3         they don't sto- they they wouldn't stop them (.)
4         talking because just in case .hhh the boy or the
5         girl eh said (.) mm I'm afraid of talking
6         because I'm always being   [corrected (.)
7   I:                               [hm
```

Here, she adds a further level of attribution. To her attribution of the fact that the students make mistakes to a lack of correction at primary school, she adds the attribution of this practice to a concern of primary teachers with not making the pupils afraid to speak through over-correction (lines 4-6).

It is significant that the teacher who claimed not to do much correction, the technology teacher, attributed his practice to a similar concern with affective factors:

(8.13) CoReINT2

```
1   I:    do you ever give
2         do you ever correct their English in class
3   T:    I for instance there's something I al-
4         actually I'm not to correct so so often (.)
5         but they are always asking I can I can
6         and I say on their speech
7         can I or I don't know
8         but I don't use to
9         I'm not used to correcting them so often.
```

```
10   I:    why is that do you-
11   T:    [because it's very difficult to explain-
12   I:    [do you have a policy
13   T:    no I mean when I am explaining
14         do you know what uh saw wood is,
15         and they try to explain to me with the the arms
16         and with their bodies
17         and using their language
18         sometimes using even Spanish words (.)
19         and I want them to try to explain to me
20         and to not be afraid of speaking English.
21         so if I correct them so very often very often
22         maybe they could be afraid of speaking.
```

Here, the teacher begins his response by identifying some correction practices (correcting word order to 'Can I ...?' - lines 5-7), but he quickly script formulates his correction practices as something infrequent (lines 8-9). In his longer discourse unit at lines 13-22, he gives a vivid description of how he encourages his students to communicate in whatever way they can (using their bodies - lines 15-16) or the L1 (lines 17-18). At lines 20-22 he attributes his practices to the same affective factor as the science teacher attributed to primary teachers: too much correction can make them afraid to speak.

The technology teacher is talking in the context of teaching a unit to a first year class, a group of learners whose characteristics still resemble those of primary students. The science teacher is talking about a fourth year group, and she describes them as having rather different characteristics which make it possible to have a less tolerant attitude towards error:

(8.14) CoReINT1

```
 1   T:    but here (.) I think they're e:::h quite eh
 2         ↑assured
 3   I:    hm mm
 4   T:    (          ) sure of themselves anyway kind of more
 5         (.)
 6   I:    hm mm      hm
 7   T:    pisan más fuerte (Sp. take stronger steps)
 8   I:    hm mm
 9   T:    .hh (          ) more ↑confident (.)
10   I:    hm
11   T:    they're more confident in a ↑way
12         so you can you can now say well (.)
```

```
13          these are your mistakes (.)
14          I don't want to listen to those mistakes any
15          longer (.) from now ↓on
```

These learners are characterised as being more 'assured' (line 2) and 'confident' (line 9), and thus more able to be confronted with their errors (lines 12-15). Again, the teacher's emotive tone comes through, as she continues to construct her reactions to the learners' mistakes in terms of her own unwillingness to put up with them (lines 14-15). In terms of how practical knowledge of language relates to other aspects of practical knowledge, this combines representations of knowledge of learners with those of knowledge of self.

The geography teacher charts a middle course between the technology teacher's strategy of avoiding correction and the science teacher's emphasis on not tolerating error. She describes the strategy of 'rephrasing' combined with an emphasis on avoiding direct negative feedback:

(8.15) CoReINT4

```
 1   I:   do you correct their ↑language in the classroom
 2        (0.2)
 3   T:   ah I try to rephrase.
 4        (0.5)
 5   I:   could you say more about that about
 6        [rephrasing ]
 7   T:   [ .hhh     hh ]yeah I try to clarify
 8   I:   mm
 9   T:   what they are saying
10        I obviously never say no
11        or I never use negative uh comments obviously
12   I:   why not why-
13   T:   uh I don't think I should say
14        I usually don't use negative comments
15   I:   hm mm
16   T:   I try to improve it try to say
17        that's a very good point
18        or that's not quite clear
19        I try to be very positive
20        in order to encourage them
21   I:   hm
22   T:   to keep trying and to keep participating
23   I:   hm mm
24   T:   uh otherwise I might prevent them from
25        participating if they know that they are saying
26        things which are absolutely incorrect
```

```
27   I:    hm
28   T:    so I try to- to get something always
29         (from the little bit)
30         even if they are wrong.
31   I:    hm
32   T:    say let's clarify or maybe .hh
33         or that's a very good point
34         but we are not talking about that at the moment
35         or .hh wait that is regarding another thing
36         why don't you say it later on
37         try not to prevent them from participating
```

Again, we see an orientation to affective, or motivational, factors in this teacher's description of her reactive strategies. She uses two script formulations (at lines 11 and 14) to construct a description of practice in which negative comments are virtually absent. She then attributes this to her purpose of encouraging them to participate (lines 20-22), or, as a negative motivating factor, to avoid causing them to participate less because of negative comments (lines 24-26 and 37).

We can see then, that affective factors play a strong role in these teachers' constructions of their reactive strategies, in how they respond to different levels of L2 competence in their learners' performance. However, the ways in which these affective factors enter the teachers' constructions of practice differ: they may chose to correct or not, or they may correct in different ways, or they may construct the learners as differently capable of being able to benefit from being confronted with their language errors. In this sense, the personal dimension, or mode of knowing, of the teachers' representations of their practical knowledge comes across clearly.

An important dimension of the teachers' representations of their reactive strategies is their descriptions of *how* they respond reactively to their students' errors. A number of procedures or techniques were described in the CoRe interviews. For example, the history teacher offers this description of how she responds to spoken errors:

(8.16) CoReINT3

```
1    I:    do you have any correction techniques
2          that you use more than others
3          for example (.) when they make a mistake
4          do you just give them the correct form immediately
5          or do you explain this is a mistake
```

```
 6          and explain why
 7          (0.3)
 8          or any other way?
 9   T:     written?
10   I:     spoken.
11   T:     spoken (.) in the classroom
12          I correct that immediately in the blackboard
13          in front of everybody
14          so everybody knows that was not the way
15          for this pronunciation or whatever at the moment
16          and if there are some difficult words
17          we pronounce altogether (.) three times
```

In this description of practice, the teacher highlights three things: the immediacy of the feedback (line 12), its visibility to all the students (lines 13 and 14), and the opportunity for communal practice of the difficult point (line 17). This is a clear construction of a reactive strategy, and it shows an orientation to techniques derived from language teaching in this subject teacher's representation of practice. This is seen clearly in the reference to drilling at line 17, a technique not normally associated with the teaching of history.

The science teacher also provided a vivid description of a reactive strategy:

(8.17) CoReINT1

```
 1   T:     I say I say can you repeat please
 2          I- I haven't understood or-
 3   I:     mm
 4   T:     please say it again
 5          and if they keep saying it the wrong way
 6          I correct a little piece (.)
 7          I ask them to repeat it
 8          and if they keep saying it wrong (.)
 9          I say I'm afraid I don't understand you
10          until they say it properly and they do
11   I:     hm
12   T:     they end up by saying it properly (.)
13   I:     hm mm
14   T:     and it's kind of going on and on and on and on
15          and I think it's a=
16   I:     hm mm
17   T:     good thing to do  (1.0)
18          this is my point of view
```

This strategy is also a well-known technique used in language teaching: feigning lack of understanding. The teacher highlights two aspects of this strategy in her description: she evaluates it as successful (lines 10 and 12), and she script formulates it as a regular part of her practice, something that happens a lot in her classes (line 14). She thus builds a description of her practice as being effective and persistent in its response to students' language errors, and by implication, as an important aspect of her teaching.

Reactive feedback also appeared in the teachers' constructions of their assessment practices. In this example, the geography teacher makes an interesting distinction between two meanings of 'language', one being the L2 and the other referring to basic literacy skills:

(8.18) CoReINT4

```
 1   I:   is there any assessment of ↑language
 2        (0.4)
 3        specifically of any language
 4   T:   I don't mark language at all
 5   I:   hm mm
 6   T:   okay but I do insist (.) that they should
 7        uh (.) use the language ↑correctly
 8   I:   hm
 9   T:   both lexic- lexical the words correct
10        the definitions whatever
11        and are writing correctly
12        arguments or whatever
13        descriptions descriptive writing whatever
14        because that will make them
15        express the ideas clearer
16        and therefore they'll have a higher mark
17   I:   uh huh
18   T:   and I tell them when they do (.)
19   I:   hm
20   T:   things well
21   I:   hm
22   T:   and I insist on ↓that
23        and when I check when I correct papers
24        they do have the corrections
25   I:   hm
26   T:   the grammar or
27   I:   hm mm
28   T:   spelling whatever they do have the language
29        correction but they don't have less mark
30        if they don't know how to do it very well=
31   I:   okay
32   T:   =unless they do not use (.) capital ↑letters
```

```
33          or basic things like that
34          un[less]-
35    I:      [why ]that wh- why do you
36    T:    because it is language
37          and it is the common rules
38          both for Spanish for names for instance
39    I:    hm mm
40    T:    to begin a paragraph with a capital ↑letter
41    I:    mm
42    T:    so it is (.) language
43    I:    mm
44    T:    it is both Spanish and English
45          and I think they- we should insist on that.
46          (0.2)
47    I:    okay
48    T:    that's very basic heh heh
49    I:    okay okay yeah it's qui- clear distinction
```

In building an account of her assessment practices, she describes her reactive strategy as one in which she corrects their L2 mistakes, but does not take away marks for these mistakes (lines 22-30). She identifies a range of aspects of L2 use that she gives reactive feedback on, including correct use of vocabulary, definitions, arguments and descriptive writing (lines 9-13). She describes her purpose in providing this feedback as one of helping them to express themselves better and so get a higher mark (lines 14-16). However, no marks are deducted for incorrect use of the L2, except for 'basic things' like capital letters (lines 32-33). When asked why this is, she responds that it is 'language', part of the 'common rules' that also apply to Spanish (lines 36-38 and 44). The teacher thus constructs a clear distinction between two ways of understanding 'language', and these are represented as having an impact on her practices at the level of her reactive strategies to her students' L2 production. In terms of teacher language awareness, we can see how an understanding of 'language' may impact on practice, with possible consequences for students' learning outcomes.

8.3 Reactive language-focused practices (LFPs)

As pointed out in chapter seven, there was a balance between proactive and reactive LFPs in the corpus, with 56 of the former and 58 of the latter. Reactive LFPs were of two main types: feedback on some aspect of learners' use of the L2, and responses to learners' queries about some aspect of the L2. In both cases, language is seen as a question of the learners' competence, whether as a correction or repair of some

troublesome aspect of performance in the L2, or in filling in gaps in the learners' competence at their request. The first type of reactive LFP was much more prevalent in the data, accounting for 46 of the 58 examples. Within the category of feedback LFPs there was a range of practices, or ways in which the teachers used the interactional resources of repair to respond to features of the learners' L2 production, as well as a variety of L2 features which were the object of repair. These are summarized in table 8.1:

Feedback LFPs	**Number of instances**	**Aspect of L2 item focused on**		
		Word choice	Pronunciation	Grammar
Other initiated other repair	18	7	11	0
Other initiated self repair	7	4	3	0
Self-initiated other repair	3	2	1	0
Embedded correction	16	8	6	2
Explicit positive feedback	1	1	0	0
Display of uncertainty	1	1	0	0
TOTALS	46	23	21	2

Table 8.1. Reactive LFPs (feedback on learner L2 use)

As can be seen in the table, two types of feedback clearly dominated over the others: other initiated other repair and embedded repair (recasts). In terms of what was repaired, word choice (vocabulary) and pronunciation accounted for practically all the examples of feedback. There were no examples of feedback on other aspects of L2 use, such as appropriateness in terms of academic registers. In other words, there was no register feedback. In order to exemplify the teachers' feedback LFPs, illustrative extracts from the data are now analysed, beginning with the most prevalent category, other initiated other repair.

Other initiated other repair occurs when a second speaker both initiates and repairs some content of the previous speaker's turn. It is a repair trajectory not much preferred in ordinary conversation (Schegloff, Jefferson and Sacks 1977) but is relatively frequent in both L1 and L2 classroom interaction (McHoul 1990; Seedhouse 2004). In the CLIL classroom data, this repair trajectory, unlike in McHoul's and Seedhouse's findings, is more frequent than other-initiated self repair. The usual interactional context in which this LFP is used is when students are taking a turn, for example giving a presentation or reading aloud, and the teacher intercedes by repeating in standard form a non target-like L2 utterance from the student's previous turn. The student then continues with his her turn, sometimes demonstrating uptake by incorporating the standard form given by the teacher into the continuing turn. Extract 8.19 is an example of an other initiated other repair LFP from a 7th grade history lesson:

(8.19) HISTLSN1

```
1   S:    the most famous early image
2         of a human a woman called Venus
3         ((pron: /'venəs/))of Willendorf
4   T:    Venus ((pron:/'vi:nəs/))
5   S:    /'venus/ /'vi:nus/ of Willendorf
6         that was find was found in ninety eighty
7         by archaeologist ((writes on board))
8         Josef Szombathy.
```

In this extract, which comes from a task-based activity micro-context (the students were assigned the task of preparing and giving a presentation), the student gives a non-standard pronunciation of 'Venus' at line 2. This occurs during the delivery of her turn and, as it is a presentation, there is no turn transition relevance place. Thus the teacher's intervention at line 4 interrupts the delivery of the presentation to both initiate and perform repair on the student's pronunciation of 'Venus'. After a misfired first attempt, the student performs a self-repair and incorporates the target form into her ongoing turn at line 5. In passing, it is worth noting that the student does another self-initiated self repair at line 6, something that was frequent in the data, though not a focus of analysis, as it is not a teaching practice.

Most examples of other initiated other repair were restricted to the teacher intervening during a student's turn (not at a turn-transition relevance place) to simply provide the target form, with the student then continuing whatever activity he/she was doing. However, in a small number of cases (4 of the 18 to be exact), the teacher offered more than simply the corrected item, but expanded the repair intervention in some way. Extract 8.20, from a fourth year biology lesson is a clear example:

(8.20) BIOLSN2

```
1   T:    it's a mixture yes (.) of what.
2   S2:   of races of dogs <of dogs races>
3   T:    different uh breeds you say (.)
4         razas breeds (0.8) of of dogs (.)
```

This extract comes from a direct instruction micro-context, in which the teacher is eliciting students' ideas about mutation as part of the topic of genetic variation. S2 is suggesting that the Doberman dog is a mixture (i.e. a crossbreed) and uses the word 'races' for 'breeds' at line 2. Note how he does a self-initiated self-repair on the noun phrase. At line 3, the teacher carries out an other initiated other repair on the student's word choice of 'races' by substituting 'breeds'. However, she goes beyond simply replacing the repairable item, signalling that this is information about the L2 with 'you say', an example of what Jefferson (1987: 88) calls 'instructing' as an accounting practice, and then providing the L1 translation for breeds. There is even evidence in her repetition of 'breeds' in a full noun phrase ('breeds of dogs') at line 4 that she is also repairing the student's self repair at line 2 to the non-target form of 'dogs races'.

Moving down table 8.1, other initiated self repair was somewhat less frequent than might be expected, especially in comparison with Seedhouse's finding that there were more examples of this type of repair than of other initiated other repair at least in his form and accuracy micro-context (2004: 145-6). Extract 8.21 shows an example of other initiated self repair from a third year geography lesson:

(8.21) GEOGLSN2

```
1   T:    Amaya okay so why did you choose that
```

```
 2          why is that the main factor of development.
 3   S1:    I think the wealth is the most important
 4          because if you don't have -
 5   T:     wealth, or health.
 6   S1:    health
 7   T:     ↑health yes,
 8   S1:    because if you don't have doctors that tell you
 9          you don't know if the water is clean or not
10   T:     ah
```

This extract comes from a task checking and feedback micro-context in which the teacher is getting the students to report back on a task in which they had to identify factors which were important in indicating a country's level of development. At line 3, S1 identifies wealth as being the most important factor in indicating development. At line 5, the teacher intervenes at what is very clearly not a turn transition relevance place to initiate repair on 'wealth' by offering an 'or choice' alternative (Long 1981). At line 6, S1 accepts the replacement of 'wealth' with 'health', and the teacher acknowledges this at line 7, and with her slight rising intonation, signals encouragement for S1 to continue reporting back on the task. It is interesting that there is no uptake of 'health' in S1's continuing turn, but by giving an account of her choice that involves doctors, she makes clearly available the inference that 'health' was indeed the choice she intended. This example is also interesting in terms of its possible ambiguity between being a genuine conversational repair, and thus one that should be seen in terms of content, rather than as an LFP. However, the interactional evidence suggests that S1 was not confusing the concepts of wealth and health, but that it was an issue of L2 use, of confusing two very similar words in English.

The next type of feedback-oriented reactive LFP, self-initiated other repair, was infrequent in the data, with only three examples being found. However, one of the examples of this type of LFP, from a first year technology lesson, was particularly interesting, as it is very complex in its repair organization, and is thus analysed here. In this extract, from a task-setting/procedural micro-context, the teacher is going over with the class the procedure for tidying up after a workshop session. For this task, some students have been assigned duties as 'heads' of different areas, such as safety, in this example.

(8.22) TECHLSN2

```
 1   T:    who's the head of safety an-
 2         [(Sarah) you (speak)
 3         [((pointing at girl at back of room))
 4         what do you have to do now
 5   S1:   e::rm em   [(0.4) leave the project in the
 6                    [((makes beat gesture with right hand))
 7   T:    on, yeah
 8   S1:   on the on the
 9   T:    on the on the,
10   SS:   ((inaudible))
11   S1:   ((reads from poster – unintelligible))
12         (4.0)
13   T:    could you tell me what you gonna
14         what you're gonna do now.
15   S1:   e:rm the the erm ↑project in the (2.0)
16   T:    leave it on the,
17         (2.0)
18         the one on the right
19   S:    (                          )
20   T:    the one on the right the right one how- head of-
21         (6.0)
22   S2:   leave the project on the shelves
23   T:    okay on the shelves.
```

At line 5, S1 begins to explain where the project they have been working on has to be left. At line 7, the teacher interrupts (again, not at a turn transition relevance place) to perform an other initiated other repair on 'in', replacing it with 'on'. At line 8, we see where S1's self initiation of repair begins, with her repetition of the repaired 'on the', signalling trouble in supplying where the project should be left. At line 9, the teacher adds to S1's self initiation of repair with his own other initiation. However, S1 is unable to come up with what she needs to complete her turn. At line 13, the teacher reinitiates the adjacency pair with another first pair part, and at line 15 S1 supplies the second pair part, this time missing both the verb and the destination of the project, as well as returning to the preposition 'in' which had been repaired at line 8. The two second pause again indicates a self initiated repair, to which the teacher responds with a very complex turn in which he recasts S1's turn by providing the missing verb and changing the preposition back to 'on'. However, this recast in itself is not the action he is performing, as he is using it to carry out the action of yet another other initiation of repair on the word that S1 needs to complete her turn, and which she herself has initiated repair on twice.

This analysis points to the dangers of labelling the kinds of actions described here as 'recasts' and feeding them into a quantitative analysis (Seedhouse 2004: 244). Doing so

would miss the action that the teacher is performing here. This action, of initiating repair, is further seen in the provision of a clue ('the one on the right') referring to what S1 is searching for, the word 'shelf', or 'shelves'. Eventually, at line 22, another student, S2, completes the repair sequence by providing the missing word 'shelves', which is taken up (we can imagine gratefully) by the teacher at line 23. This rather complex sequence is indicative of a CLIL teaching practice in which, within a clearly meaning-focused micro-context, the teacher allows a certain amount of struggle to take place as the students try to find the L2 words they need to talk about procedural aspects of learning. In itself it is an orientation to their L2 competence, and an aspect of language awareness as it relates to learners. It is a practice that orients to the required competence being there among the learners, with the teacher's provision of the required item as a last resort. It is perhaps not surprising that it is not done very frequently in these CLIL classrooms, as we can imagine that, if it were, there would be risks in adding a considerable burden to the already demanding activity of doing content learning in an L2.

The other frequent reactive LFP in the data was that of embedded correction, or recasts as they are more commonly known in the SLA literature (Ellis and Sheen 2006; Lyster 2007; Seedhouse 2004: 61). Jefferson (1987) distinguished between 'exposed correction' and 'embedded correction'. Exposed correction refers to when correction itself becomes the activity, or interactional business, as in all the corrective feedback LFPs so far considered. Embedded correction is when correction is done as part of on going topic-focused talk, with no interruption for 'correcting' as an activity or any accounting for why the correction has taken place. The next speaker reformulates some aspect of the previous speaker's utterance but inserts it into the ongoing topic-focused talk. This is quite close to Long's (2006) definition of recasts as being implicit, in that language does not become a focus of the discourse and the flow of communication is not interrupted. It is also close to Lyster and Ranta's (1997: 46) description of recasts as involving 'the teacher's reformulation of all or part of a student's utterance minus the error.'

In the CLIL classroom data, embedded corrections, or recasts, were the second most frequent feedback LFP, with 16 instances. The targeted aspects of the L2 were pretty evenly divided between vocabulary and pronunciation (8 and 6 respectively), with only

two examples of embedded corrections of grammar, something which confirms Lyster's (1998) finding that teachers in content-based classrooms are less tolerant of lexical and phonological error than of grammatical error. In this example from a 9th grade history lesson, the teacher performs an embedded correction on the student's pronunciation of 'aisles':

(8.23) HISTLSN2

```
 1   T:    do you remember the name of these two corridors?
 2         (0.4)
 3   S1:   e:h
 4   T:    at the sides (.) sides?
 5   S2:   °aisles°
 6   T:    what was the name of this?
 7   S1:   aisles? ((pron: /aɪzləz/))
 8   T:    aisles. ((standard pron))
 9         that's right the aisles here (.) good.
10         and what cardinal point is this part (.)the apse
```

This extract comes from a task checking and feedback micro-context in which the students had been identifying parts of a Romanesque church from pictures on a website. At line 1, the teacher uses a first pair part to elicit the term 'aisles'. At line 5, S2 produces the correct second pair part, but the teacher seems not to hear it, as she renews the first pair part at line 6. At line 7, S1 provides the correct term, but with non-target-like pronunciation. The teacher reformulates this as the target phonological form at line 8, and then continues with another turn constructional unit, which is a positive evaluation. Her next TCU is another first pair part which continues the activity of checking the task. Even though the teacher repeats 'aisles' at the initiation of her turn at line 8, the evidence does not point to a suspension of the task-checking activity to do the business of correction. The repetition of the student's offer can readily be interpreted as an acknowledgement of her contribution, and, indeed, the teacher's whole turn is designed as a positive evaluation. However, the teacher's stress on especially her first utterance of the target-like form of 'aisles' at line 8 can be seen as making this phonological form more salient to the learner(s) (see Leeman 2003).

Extract 8.24, from a 9th grade geography lesson again shows how recasts, or embedded corrections, respond to the student L2 output without interrupting the ongoing activity of the micro-context:

(8.24) GEOGLSN2

```
1   T:    another answer yes ↑Alicia
2   S1:   eh because it's important
3         that we know the form
4         that (       ) that's
5         that it was evolutionated=
6   T:    =and how things evolve right
7         how things move to better
8         okay good thank you
9         Lucía do you have an answer
```

This extract is from a task-checking micro-context in which the students are being asked to report back on a task in which they had to list reasons for studying development. At line 5, S1 produces the non target-like form 'evolutionated', and this is followed up by the teacher's recast to 'evolve' in a way which smoothly continues the ongoing task-checking activity. Note the latching between lines 5 and 6 and the teacher's turn-initial 'and' which reinforce this sense of ongoing topic-focused activity, with no indication that 'correction' is the interactional business at hand. It is also noticeable that in this extract, and the previous one, the recast is accompanied by positive evaluation of the learner's contribution. In terms of the teachers' constructions of the students' competence in section 8.2 of this chapter, there are interesting linkages with their emphasis on affective aspects, that is, of not dampening students' efforts to communicate with over-correction, and of valuing their contributions. However, that said, it is worthwhile noting that contrary to findings in content-based immersion contexts (e.g. Lyster and Ranta 1997), recasts were not the most common type of feedback in this corpus of CLIL lessons. As we have seen in this section, other initiated other repair (which could be seen as the most 'face threatening' type) was the most favoured feedback LFP. Here, we can see a certain tension between teachers' affective factors (as seen in their constructions of practice) - that is of being 'fed up' with certain errors, and their need to avoid demotivating the students with too much correction.

In this light, talking of affective factors, it is noticeable that the teachers did not provide positive feedback on the students' L2 output *as* L2 output. In the entire corpus, there is just one example of an LFP in which a teacher does this, as seen here in extract 8.25.

(8.25) GEOGLSN2

```
1   T:    okay so things are changing
2         and we have to study how things change okay
3   S1:   thanks to development we can improve things
4   T:    we can improve things excellent (.)
5         that's a good answer I like that word improve
6         do you think it's a that's a good word improve?
7   S1:   yes
```

Again, in the teacher's turn beginning at line 4, we can see a very positive assessment of the student's contribution. She does this by repeating the exact clause used by the student ('we can improve things'), positively evaluating the whole answer (line 5), and then producing a subjective evaluation of the word 'improve'. She then involves the student in this positive evaluation with the adjacency pair at lines 6 and 7. This is a clear orientation to language as a matter of competence, in this case the identification of, and positive assessment of, displayed L2 competence. The other very minor LFP with one example was when the teacher responded to an aspect of a student's L2 production with an expression of doubt about her own L2 competence, as in this case:

(8.26) BIOLSN3

```
 1   T:    what's your blood type
 2         do you ↑know
 3   S1:   eh zero (.) um (.) zero negative
 4   T:    zero negative
 5         I don't know if it's zero or nought in English
 6         in Spanish you say cero O particular
 7   S1:   but no (               )
 8   T:    well we say both
 9         it's actually better to say cero
10         at the end of the day
11         anyway I don't know but mine is A positive
```

At line 5, the teacher, having acknowledged the student's response to the referential question, expresses doubt as to whether English uses 'zero' or 'nought' to talk about

blood groups. It is not an evaluation of the student's L2 competence but of her own competence in an aspect of the L2. We can see her a certain positioning by this teacher as regards her own L2 competence. Epistemic uncertainty can be a public matter for her, and it does not seem to perturb the ongoing interactional accomplishment of the classroom business, in this case direct instruction about genetic variation, with blood groups as an example.

The other main category of reactive LFPs was when the teachers responded, not to any error in the students' L2 production, but to a query from a student about some aspect of the L2. This was a relatively infrequent type of LFP, with a total of 12 in the corpus, but as a teaching practice it has significance in terms of what it reveals about the CLIL teachers' orientations to the L2 as a matter of competence. These LFPs were divided between two main types: teachers' responses to students' requests for the L2 translation of an L1 item, and responses to students' requests for information about the meanings of L2 items. The first type was more frequent (7 out of the total of 12). An example of each is analysed here.

During topic-focused activity students could ask the teacher (at times other students) for L2 translations of L1 terms. These could be items of subject specific lexis, more everyday items used in talking about content, or grammatical items used for expressing logical relations in building discourse. Extract 8.27 is an example of the latter, where a student in a geography lesson needs a term to link two ideas:

(8.27) GEOGLSN2

```
 1   S2:   no no no becau-
 2         you can get a:n ↑illness (.)
 3         with the: (.) <not clean ↑water>
 4         and then the doctor ca:n (.) can:
 5         tell to you what ar- have you got- have
 6         (2.8)
 7   S:    [what (                        )
 8   S2:   [what have you have to
 9   S:    what do you have to do
10   S2:   what do you have to do
11   S:    what you have to do
12   S2:   and he can tell you- to you
13         what do you have to do (.)
14         ↑a:nd      [heh heh
```

```
15   T:              [okay Eva Eva
16         okay can we let Eva er give her ↑idea
17   S3:   como se dice aún así=
18         ((Sp. how do you say even so))
19   T:    =even though
20   S3:   even ↓though you don't have
21         clean water to drink
22         (1.8)
23   T:    why not
24   S2:   why not
25   T:    >wait wait wait wait wait<
26         okay excellent Carlos your point
```

At lines 1-5, S2 argues that having a doctor may be more important than having clean water, as at least a doctor can tell you what you need to do if you get sick. At line 17, S3 asks for the English translation of the Spanish concessive adverbial 'aún así', to which the teacher responds immediately (note latching) at line 19 with 'even though'. Interestingly, the student code-switches to make the request, whereas in other examples of this LFP, they used the L2 as in 'how do you say' with the Spanish word. S3 takes up the teacher's response in her following turn to rebut S2's idea. However, what S3 needed to express her argument was not 'even though' but 'even so', and this can be seen both from the content of the turn at lines 20-21 and the downward intonation on 'though' at line 20. Her turn does not take the form of a subordinate clause, as it would if 'even though' was used in its target form. At lines 23 and 24 both another student and the teacher make sure that the focus remains on the interactional business of the currently operating micro-context, which is task-checking. This example shows how L2 terms were asked for and supplied at point of need in the hurly-burly of ongoing meaning-focused interaction, and quickly taken up and used, whether or not they were target-like. In terms of positioning and L2 competence, the teacher is positioned by the students as an authority not only on the subject matter at hand (here, the geography topic of development), but on lexical and grammatical aspects of the L2.

Students also requested information about L2 items. This was generally accomplished through a range of actions, such as saying the term with a rising, questioning intonation, asking what the term means, or using the formula 'how do you say ...' even though an L1 term is not identified. These actions are all exemplified in this extract from a technology lesson, in a task-setting context, in which students are being instructed about how to highlight and summarize texts they read:

(8.28) TECHLSN2

```
 1   T:   you have to choose a material
 2        for a certain thing you are going to make (.)
 3        you have to take into account a wi:de range of
 4        facts (1.8)
 5        and this is as well simply to read okay.
 6        just simply to read.
 7   S1:  wide?
 8   T:   <wide (.) range> (.) of facts.
 9   S1:  ¿y qué es?
10   S2:  what is heh heh
11   T:   un amplio:: (.) wide is?
12        the opposite of wide is?
13        (1.2)
14   SS:  (          )
15   T:   narrow (.) A:Mplio A:Ncho (0.2)
16        range, es (2.2)in Spanish María?
17   S3:  what is (.) range, (°I don't know°)
18   T:   (          ) range is (.) and facts?
19   SS:  (                    )
20   T:   facts. en facto, you would say,
21        that's not a word.
22   S4:  de hecho
23   T:   de hecho yes (.)
24        hay un amplio rango, (.) de hechos.
25        (1.8) if you: look carefully
26        you can guess what the words mean okay,
27   S3:  eh, what is the second word?
28   T:   range (2.2)
29        ((writing on board))
30   S3:  and how do you say,
31   T:   range.
32   S5:  do we have to do the outline and the summary of
33        these two  paragraphs?
```

At line 7, S1 says 'wide' in a rising tone, which the teacher responds to by repeating the phrase 'wide range of facts'. The request for information is reinforced at line 9 by S1 by being made explicit and code-switched into Spanish (as well as being echoed in L2 by S2 at line 10). At line 11, the teacher begins his response by giving an L1 translation, but self-repairs to the LFP of eliciting a knowledge display from the students. Once 'wide' has been dealt with by line 15, he does another knowledge display elicitation at line 16. At line 17, S3, rather than supplying the projected second pair part, requests information about 'range'. The teacher continues with his elicitation strategy, eventually giving a full L1 translation of the phrase at line 24. However, at lines 27 and 30 there are two more requests for information from S3. It may be that these are requests for

information about pronunciation, as an L1 translation for 'range' has already been given. In this extract we see students actively involved in seeking information about L2 linguistic items emerging in a classroom micro-context, and these examples of student agency make relevant a range of LFPs on the teacher's part. However, the dominant micro-context is not lost, the main business does not become language, and, once again, it is a student (at lines 32-33) who shifts attention back to the task-setting activity at hand.

8.4 Chapter summary and conclusion

This chapter has presented the findings on the teachers' knowledge, thinking and practices in relation to language as a matter of learners' competence. The first part of the chapter drew on the teachers' verbal commentaries to show the ways in which they 'constructed' the learners as differently competent in using the L2 in different situations and stages of secondary education. The teachers' descriptions of their own practices in relation to responding to displays of learner (in)competence were also analysed. Teachers reported using a range of strategies for responding to students' language errors, and it was notable that affective considerations played a considerable role in their approach to responding to students' problematic L2 utterances. There was some divergence in the teachers' accounts of practice in this area. While two of the teachers expressed concern about over-correction demotivating the students to participate, one teacher, the science teacher, built into her construction of practice a sense of impatience and frustration witht the persistence of certain basic errors, especially as the students had been taught in English for a good number of years. This teacher 'constructed' the learners as being ready to be confronted with their mistakes, while the geography and technology teachers described a much more cautious approach. Language awareness, in its dimension of knowledge of the learners' states of development, seems to be highly sensitive to contextual constraints, and teachers' individual preferences.

In terms of the teachers' reactive LFPs, two types of feedback clearly dominated over the others: other initiated other repair and embedded repair. This has some consistency with the teachers' constructions of practice, as implicit recasts, or 'reformulations' were identified as a strategy by at least one teacher. In contrast with the proactive LFPs, the reactive ones were not restricted to basically one language area (vocabulary), but were

quite evenly divided between vocabulary and pronunciation. Thus, pronunciation emerged only in the context of reactive LFPs, suggesting that this aspect of L2 use is only attended to when errors are perceived in the students' ouput. As with the proactive LFPs, grammar was almost completely absent in the teachers' reactive strategies. In this there is also a consistency between what they say and what they do (or what they don't say and what they don't do), as grammar was not generally a feature of the teachers' constructions of the learners' competence.

The conclusion, then, must be that, just as in their practices relating to language as a curriculum concern, in the area of language as competence, there seems to be little evidence of deliberate policies about which aspects of language to focus on. This is unsurprising, as such a principled language policy depends on curriculum-relevant language objectives being identified in the first place. Where there seems to be a much more sensitive approach is in the teachers' deployment of interactional competence, and how this links to their 'constructions' of learners' abilities. Students are constructed as being differently competent at different levels and in different situations, and there is evidence that teachers adjust their interactional practices to take this into account, for example by letting a student in the technology class 'struggle' to express appropriately a procedural matter, or allowing them to use Spanish to talk about personal issues in tutorials.

In summarising the two chapters which focus on the two main types of LFPs, we can say that in spite of the somewhat incidental approach, language, in the form of attention to aspects of the L2, was a significant feature of these four teachers' classroom practices. Just over 100 LFPs in around 9-10 hours' teaching may not seem to be a great deal, but when it is taken into account that some of the LFPs described in the two chapters were up to 20 lines and above of transcript, this, along with the average frequency of one LFP every 5 minutes of classroom time, means that a focus on language was clearly present in these classrooms. Again, what stands out from the analysis is the interactional competence with which these teachers (and their students) managed these shifts into language-focused practices without losing the meaning-orientation of the content learning micro-contexts they were jointly creating. All the LFPs analysed in the chapter are characterized by these smooth transitions and shifts of attention towards and away from aspects of the L2.

Chapter 9. Discussion: towards a model of CLIL teachers' language awareness (TLA-CLIL)

9.1 Introduction

Chapters six, seven and eight presented the findings of the multicase study, showing how the three perspectives on language emerged in the four teachers' knowledge, thinking and practices. These findings addressed the six research questions of the study, which had emerged from the triperspectival conceptualization of language presented in chapter three, mapped onto the three dimensions of teacher language awareness (TLA) described in chapter four. This chapter brings together the evidence as presented in the three findings chapters and the ideas which form the conceptual underpinning of the study. From this dialogue between the findings and the theoretical perspectives emerges a model of the quintain: CLIL teachers' language awareness (TLA-CLIL). This model is described in terms of the four modes of knowing which were introduced in chapter four: public-theoretical, public-practical, personal-practical and personal theoretical. The key idea is that, following Elbaz (1981), it is not only necessary to describe the *contents* of CLIL teachers' TLA, but the different *orientations* in the way TLA is held and used.

The chapter has the following structure. In the next section, 9.2, the teachers' TLA-CLIL is described in terms of how knowledge of each of the three perspectives on language is oriented to by the teachers according to the four modes of knowing. This is followed in section 9.3 by a discussion of how the teachers' language awareness was integrated with other domains of practical knowledge required for CLIL teaching. In section 9.4, the discussion focuses on a key theme emerging from the study's findings: the centrality of teachers' L2 interactional competence as part of the TLA necessary for CLIL teaching. Section 9.5 identifies a range of implications of the study for teacher education in CLIL, and section 9.6 broadens this discussion to consider the study's implications for research on teachers' knowledge, thinking and practices more generally.

9.2 TLA-CLIL and the four modes of knowing

In this section, the findings from the study in each of the three perspectives on language and language awareness are discussed in terms of the four modes of knowing in the framework introduced in chapter four. The framework is reproduced here as figure 9.1 for convenience. It will be recalled that knowledge of language in each of the three perspectives can be held, used and represented as any of the four modes of

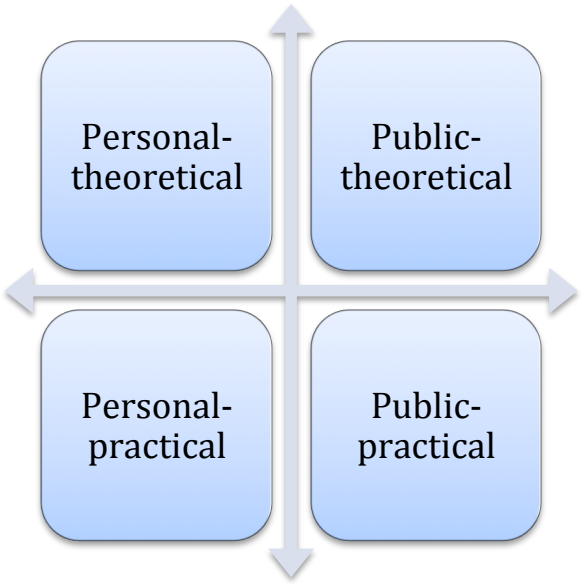

Figure 9.1. Framework of four modes of teacher knowledge.

knowing. For example, language as a curriculum concern/metalinguistic knowledge can be held, used or represented as public-theoretical, public-practical, personal-practical or personal-theoretical knowledge. In the following three sub-sections, the findings on the teachers' TLA-CLIL in each of the three perspectives on language is discussed in terms of the four modes of knowing and the relationships between them.

9.2.1 Language as a tool for learning in the different modes of knowing

As was discussed in chapters three and four, this perspective is concerned with how teachers mediate subject-matter learning through their use of the L2 in classroom interaction. In Richardson's (2002) term, it is 'foundational' rather than discipline knowledge, as it is an instrument used to reach disciplinary goals and not discipline-specific knowledge itself. Using the L2 as a tool to achieve pedagogical purposes can be

seen both in terms of the communication systems teachers set up (the 'communicative approach' in Mortimer and Scott's [2003] terms), or language as mediation to build bridges between students' current understandings and the new subject-specific understandings (Gibbons 2006). Following the discussion in chapter three, as a matter of public-theoretical knowledge it could involve having some familiarity with sociocultural, neo-Vygotskian theories of the role of language in concept formation, and theoretical perspectives on education which advocate dialogic teaching (e.g. Alexander 2008) and language as a tool for 'thinking together' (Mercer 2000). It could also involve knowledge of the kinds of theoretical frameworks used in language teaching to construct understandings of the relationships between classroom interaction and pedagogic goals, such as Walsh's modes analysis (2006) or Seedhouse's micro-contexts (2004). This may also involve terminology for the description of classroom talk, such as typologies of question-types (Dalton-Puffer 2007) or interaction sequences such as the IRF exchange (Sinclair and Coulthard 1975). It can involve theoretical knowledge about the CLIL lesson as a speech event, with its possibilities and limitations for both content and language learning (Dalton-Puffer 2007), or knowledge about how language is used to communicate content-related meanings in learning materials and activities.

As public-practical knowledge, this domain would involve acquaintance with any practical frameworks designed to help teachers put these theories into practice, such as Walsh's (2006) self-evaluation of teacher-talk (SETT) grid, Mortimer and Scott's (2003) framework for science teaching, or Gibbons' (2006) and Walqui and van Lier's (2010) work on scaffolding or Guerrini's (2009) work on scaffolding in CLIL materials. As personal-practical knowledge, the focus will be on how teachers actually use the L2 in classroom interaction or in activities and materials to achieve their pedagogical goals. As personal-theoretical knowledge, it will refer to the underlying principles and philosophies relating to language as a tool for learning that they produce in their reflections on practice.

The study's findings in chapter six showed that, in general, the teachers did not make reference to public-theoretical knowledge of this domain in their representations of practice. In fact, it turned out that this was the most difficult domain in which to elicit verbalisations of teachers' knowledge, and for this reason the video comment technique was used. Even so, as the findings show, quite a lot of interactional work was necessary

to get the teachers to focus on their use of language as a tool for learning, rather than on what they were using language *for* in terms of content goals. Teachers, in their accounts of practice, even when they were focused on features of classroom talk, were more likely to construct their accounts as personal practical knowledge, and not refer to any public theories or terms such as scaffolding, mediation or dialogue, or terms for the description of classroom talk such as IRF exchanges or display questions. This is hardly a surprising finding, as it is well known that teachers need to be provided with a metalanguage if they are to describe classroom talk systematically (Walsh 2006).

There was little or no evidence that the teachers held, used or described public-practical knowledge about ways of using classroom talk as a tool for learning. Again, this is not surprising as there is a lack of such public-practical knowledge in the educational literature (notwithstanding Walsh and Mortimer and Scott). Indeed, in the field of science education, Mortimer and Scott point out that classroom talk has been 'somewhat neglected' (2003:2). However, there was one possible exception to this in the science teacher's video comments on the 'violinist' story (see extract 6.15 in chapter six). She described this technique as 'self-disclosure' and gave an account of how she had learned about the benefits of this during an in-service CLIL training course in Scotland. 'Self-disclosure' as a classroom technique recommended on a training course is a clear example of public-practical knowledge, a strategy made available through training and/or published materials which teachers are invited to incorporate into their practice. As a way of using language for achieving pedagogical goals (as was the violinist story analysed in chapter six) it clearly belongs to the perspective on language (L2) as a tool for teaching and learning. By using this technique in the classroom, telling the violinist story, the science teacher was turning this public-practical knowledge into personal-practical knowledge.

As personal-practical knowledge, L2 English as a tool for achieving pedagogical goals was clearly evidenced in the micro-contexts described and analysed in chapter six. All four teachers were able to use L2 English flexibly to carry out such pedagogical actions as working with students' prior conceptions, explaining concepts, setting up and monitoring activities, and giving feedback on completed tasks. They used a range of interaction pattterns to do this, including IRF sequences, long turns in which they gave instructions and explanations or told stories, dialogic teacher-whole class interaction,

and student-student discussion, as in the geography example on development (see teacher's comments in extract 6.17). The picture of the teachers' interactional practices in this study thus differs somewhat from some accounts of CLIL or content-based classroom discourse in the literature, from Swain's (1988) description of the language in immersion classrooms as functionally restricted and lacking in opportunities to engage in extended discourse, to Dalton-Puffer's (2007) description of Austrian CLIL classrooms' diet of display questions and facts. The evidence from this study is that the teachers had internalised the BEP's emphasis on a 'hands-on' teaching approach, with the main lesson format being a three-stage sequence in which the teacher set up, monitored and checked tasks which the students carried out in pairs or small groups. This was of course reflected in the classroom interaction micro-contexts described in chapter six, and in the teachers' postactive video-based accounts in which they oriented to the same pedagogical goals as were evidenced in the interaction. TLA-CLIL in this domain then, is the ability to use the L2 for a range of pedagogical purposes, and to be able to provide coherent accounts or reasons for interactive decisions. In the practice perspective taken in this study, it is a shared understanding structured by a set of ordered social practices.

In the video-stimulated interviews, the teachers did not just provide accounts of specific actions as seen in the vignettes, but also script-formulated more general descriptions of practice, as in extract 6.7. Here, the teacher distinguished between two ways of talking to meet different pedagogical goals (just talking about things and giving your opinions, and being exposed to the scientific explanations), and described these in terms of what generally happens by using words like 'sometimes' and 'other times'. This is an example of a more general representation of personal-practical knowledge, not just tied to one classroom episode. It highlights an aspect of interactional competence as language awareness, that of the need to interact in different ways to achieve different pedagogic purposes. Another example of personal-practical knowledge as representation in this domain is the analysis of extract 6.10, where the geography teacher in her video-stimulated comments gives a more general script-formulation of her practices in giving instructions. Thus, in contrast to the general lack of evidence of public-theoretical or public-practical knowledge in this perspective (either enacted or represented), there is clear evidence of personal practical knowledge, both enacted and represented.

Because knowledge in this perspective on language is inherently difficult to capture without specific examples of practice to hand (in this case in the form of video vignettes), there was limited opportunity to elicit the teachers' personal theories or beliefs about the use of the L2 as a tool for learning. This may also be due to the fact that watching video vignettes invites more immediate reactions to what is seen, rather than stimulating the production of more reflective statements of underlying personal theories, beliefs and principles. In general, the teachers in their video comments gave either accounts of their specific actions as seen in the video, or moved into script-formulations of more general aspects of personal-practical knowledge in this domain. However, these tended to remain at the level of more general descriptions of practice, perhaps with some reasons or addition of evaluative colouring as in the teacher's statement that she 'hated' giving instructions in extract 6.10.

However, there were some examples of the teachers using the video vignettes to shift into the personal-theoretical knowledge mode. Extract 6.17 is an example of this. Here, the geography teacher identifies some underlying principles to explain why a particularly rich kind of interaction occurred in her classroom. Such productive talk depends on the students having had an opportunity to generate ideas in a small group task, before they can be shared in a whole class discussion. This is expressed by the teacher as a personal theory, although it could well articulate with public-theoretical or even public-practical knowledge. Personal-practical knowedge is the appropriation or 'personalisation' of public-practical knowledge, and personal-theoretical knowledge can have this same relationship with public-theoretical knowledge. It is knowledge that emerges not only out of experience as personal-practical knowledge, but as engagement with more 'public' theories and practices. Because knowledge relating to the L2 as a tool for learning is not particularly visible in teacher education as public theories or pedagogic practices, though it has been a research topic in general education and applied linguistics, there is little evidence of these modes of knowing in the study's findings in this perspective. However, it is richly represented in the teachers' practices and representations of practice as personal-practical knowledge, and also, but much less so, as personal-theoretical knowledge.

9.2.2 Language as curriculum concern in the different modes of knowing

The perspective on language as a curriculum concern, as seen in chapter three, is a much richer area of public theorising and recommended practical strategies than language as a tool for learning. The literature review showed that researchers in immersion and content-based language teaching have long been concerned about the role of a focus on form within meaning-focused content teaching. Lyster's (2007) recommendation for a 'counterbalanced' approach provides a strong theoretical justification for an attention to formal aspects of the L2 within content instruction. His distinction between a 'proactive' and 'reactive' approach to attention to aspects of the L2 forms the basis of the description of the teachers' actual practices in chapters seven and eight, with the distinction being somewhat adapted for the purposes of this study. In Lyster's use of the term, a 'proactive' approach would consist in a principled selection of L2 items for awareness raising and practice activities, with the result that there would be language activities in the classroom. The teachers were clear in the CoRe interviews that language was not a principle in organizing the curriculum, and, in general they reported an incidental approach to the L2, dealing with language points as/if they came up.

Chapter three highlighted a range of public theories potentially available to CLIL teachers for organizing linguistic aspects of the curriculum, including Coyle and colleagues' language triptych, consisting of language of, for and through learning (Coyle *et al*. 2010). The chapter also described relevant work within the systemic functional linguistics (SFL) tradition in educational linguistics. SFL-informed researchers on education have long recommended a more strongly framed and classified approach to language in content teaching (e.g. Mohan and Beckett 2003; Schleppegrell 2004), in which subject-specific texts (genres) and their lexico-grammatical features are a focus of attention. In terms of teachers' knowledge, chapter four described how, within this tradition, Love (2010) has directed attention to the importance of subject-specific literacy for all teachers, positing a type of knowledge that she labelled LPCK (Literacy Pedagogical Content Knowledge).

None of these types of public theory appeared in the teachers' representations of practice. As was seen in chapter six, in the CoRe interviews, even when asked about

features of subject-specific texts, the teachers did not refer to any public knowledge in this area, but instead focused their responses on descriptions of aspects of the subject matter content or its terminology. The most likely conclusion to be drawn here is that the teachers had not been exposed to any of these public theories in their training, and thus they were not available to them in their representations of practice. Alternatively, and there is anecdotal evidence for this (three of the teachers had attended in-service training led by this researcher which focused on a genre approach), the teachers' exposure to these theories was too limited for them to have been appropriated and turned into personal theories or beliefs.

As the teachers did not make any reference to public theories about language (L2) as a distinct pedagogical focus in content teaching, it was not to be expected that they would refer to any publicly-available practical strategies for implementing any of these theoretical approaches. Another possible explanation for this is the limited availability of suitable resources and materials to exemplify any of the theoretical approaches, for example subject-specific materials which use a genre approach. Much of the available material consists of language activities which accompany the content texts, but are not really integrated with them (Morton forthcoming 2013). There is also a lack of publicly-available training material that would equip CLIL teachers with a repertoire of strategies for a principled proactive focus on aspects of the L2 important to specific content topics or their students' L2 development for either academic or more general purposes. As Dalton-Puffer (2007) points out, there is an urgent need for a principled approach to the language curriculum in CLIL. Some of the approaches mentioned here as public theories could well provide the foundation for such a curriculum, but this has not been translated into public-practical knowledge which can be used by CLIL teachers and transformed into personal practical knowledge.

It is when we move into the personal knowledge modes that we see how attention to aspects of the L2 in fact does play a substantial role in the teachers' practices and representations of practice. This was seen in chapters seven and eight in the variety of language-focused practices (LFPs) used by the teachers, and the frequency with which they appeared. Some of LFPs were sequences of substantial length, although they never 'took over' from the micro-context that was operating at the time. Thus, it can be said that the teachers attended to the L2 as some kind of curriculum concern. However, it

appeared, in Leung's (2001) term, as a more 'diffused' concern than any distinct or systematic proactive approach to the L2 as curricular content in conjunction with the subject topics. Thus, although the teachers' actual practices, descriptions of practice and personal theories were rich in language-focused concerns, the approach to the L2 was in general incidental in nature and did not engage with public theory and practice regarding the integration of content and language.

In terms of personal practical knowledge, there was evidence of congruence between the teachers' representations of practice and their actual practices. For example, the technology teacher's description of introducing the English names of tools used in the workshop was seen in the classroom video recording, and the science teacher's reported practice of focusing on 'certain language points' was seen in her classroom practice. One teacher described a practice of using specific language activities, but this was not seen in her video-recorded lessons. The analyses of the LFPs in chapters seven and eight show that the teachers did in fact skilfully manage shifts in attention between the meaning-focused activity in each of the micro-contexts and aspects of the L2. They were able to maintain an overall focus on the main interactional business while directing the students to aspects of word meaning, spelling or pronunciation.

Curiously, the interactional competence displayed by the teachers here when they initiated a focus on the L2 (in contrast to reacting to a student's utterance) resembles the kind of teacher behaviour described by Lyster (2007: 47-50) in his description of *reactive* approaches. However, Lyster's characterisation of proactive approaches as the use of planned noticing, awareness and practice activities does not capture the finer distinction between reactive approaches and more spontaneous, impromptu proactive or preemptive shifts to attention to aspects of the L2 during classroom interaction. The problematic issue here, and in this the study's findings support Lyster's arguments, is the lack of any public theory driven systematic or distinct focus on language in the teachers' practices. They clearly demonstrate the practical knowledge in terms of the interactional competence necessary to maintain a focus on meaning while managing shifts of focus into language, but the question remains of what motivates their choices of language points to focus on.

Turning to the other personal knowledge mode, that of personal-theoretical knowledge, the teachers provided rich descriptions of personal theories and beliefs relating to the role of the L2 as a curriculum concern. In the teachers' descriptions of underlying principles or beliefs, there was clear evidence of the contextual constraints weighing on their instructional practices. One teacher talked of her 'obsession' with getting through the content, as the eyes of many people were on the Bilingual Project. This description of the contextual constraint that covering the content curriculum is primordial, was shared by the other teachers, except the technology teacher, who voiced the principle that it is better to cover less content thoroughly than to cover a lot of content without the students understanding it. In general, though, the evidence from the teachers' representations of practice points to them constructing a version of reality in which it is content that drives their instructional practices, and in which they have to cover the same content as non-bilingual teachers, otherwise the Bilingual Project will be exposed to criticism. The result is that there is little time left 'to relax and do stuff I really like' as the science teacher describes language-focused activity. This teacher also put forward a view that there should be a clear division of labour between subject teachers and English teachers, with subject teachers not being responsible for language-focused activities such as highlighting the features of texts. This suggests that the language activity meant by the teacher is one of focusing on 'certain language points' as they come up. It does not necessarily entail a sustained and systematic proactive focus on the L2 in the form of awareness-raising or practice activities, even of L2 features strongly linked to the content topics being studied. In this, the teachers' representations of practical knowledge and their personal theories reflected their classroom practices, as the 'proactive' LFPs analysed in chapter seven were all incidental and did not seem to engage with any pre-planned systematic approach to highlighting L2 features.

9.2.3 Language as a matter of competence in the different modes of knowing

As was seen in chapter three, the L2 as a matter of learners' competence has long been a central concern in public theorising in all the different types of content and language integrated pedagogy. L2 as a matter of teachers' competence has also been a focus of attention, particulary in research on non-native teachers in English language teaching. In terms of learners' L2 competence, CLIL teachers potentially have available to them the

range of theoretical perspectives reviewed in chapter three, such as a variety of established and more emergent views of communicative competence, academic language functions, interpersonal language functions, and a range of mainstream and alternative approaches to SLA (Atkinson 2011). Given the central importance of the CLIL lesson as the main speech event that learners participate in, there is a strong a priori argument that practice should be informed by clear statements about the kinds of communicative competence learners can be expected to develop in this context (Dalton-Puffer 2009). Essential to public theorising in this area is knowledge of the theoretical foundations of different approaches to assessment, including classroom-based formative and dynamic assessment (Llinares, Morton and Whittaker 2012) and functional approaches such as that of Polias (2003). On a metatheoretical level, these theories can be categorised as having either a 'performance' or 'competence' orientation in Bernstein's (2000) terms, with functional approaches taking a much more performance-based approach, and some SLA-based work, particularly that influenced by Krashen's (1985) comprehensible input hypothesis, adopting a much more competence-based perspective.

As with the other two perspectives on language, the findings show that the teachers in their representations of practice did not make explicit reference to any of these publicly-available theories. They did not mention any of the competence-oriented theories such as interlanguage or comprehensible input, or the performance-oriented theories such as functional approaches to developing academic literacy in L2. Though the findings show that the teachers did have rich representations of their learners' L2 competence, and were able to skilfully deploy interactional competence in responding to aspects of their learners' linguistic output, they did not generally produce explicit statements about their learners' L2 communicative competence which could be linked to public theory. In Freeman's (1993) terms, they did not use a theoretical metalanguage to (re)name their experiences and practices.

In terms of public-practical knowledge, there is also an extensive literature on techniques and strategies that teachers in L2 classrooms can use to help drive forward learners' language development. Within SLA, work on negotiation of meaning and the provision of reactive feedback has identified a range of strategies that teachers can use to work on learners' awareness of and production of appropriate L2 forms (Lyster

2007). Within a more functional approach, a range of scaffolding strategies has been made available to teachers in work such as that of Gibbons (2002, 2006), Mohan and Beckett (2003) and Walqui and van Lier (2010). The theoretical work on formative assessment has underpinned practical recommendations for assessment for learning (Assessment Reform Group 2002). The study's findings show that the teachers did not explicitly orient to publicly-available practical knowledge specific to content-based approaches in this domain. For example, there was no evidence of use of register scaffolding in the form of functional recasts. However, some practical strategies from language teaching were evident in their practices, such as the use of drilling or input enhancement by writing L2 forms on the board. As in the other perspectives on language, the teachers represented and deployed rich resources in the personal knowledge modes, but these did not generally engage in any explicit way with knowledge in the public modes.

Turning to the findings on the teachers' classroom practices in this language/language awareness domain, the analyses in chapter eight showed the interactional competence and wide array of practices through which they reacted to learners' L2 output while maintaining a focus on the content-led pedagogic agenda. However, as with the teachers' practices and cognitions in relation to the L2 as curriculum concern perspective, the question arises as to the rationales for the selection of aspects of the students' L2 output for reactive focus. As in other studies of content-based L2 classrooms (Dalton-Puffer 2007; Lyster 2007), lexis and phonology were almost exclusively the focus of attention, with grammar and discourse practically absent. Feedback on L2 output appeared to be incidental, and the motivation for correcting errors often one of annoyance at their persistence (as in Swain 1988) rather than any systematic approach to which L2 features should be focused on.

In their representations of their learners' L2 competence, the findings show how the teachers displayed richly layered personal practical knowledge, particularly as it related to learner and contextual factors. They described how their learners were differently competent in the L2 according to age, grade, topic (academic or personal), situation (e.g. classroom, workshop, ICT room, tutorial period). They described how their practices varied according to these learner L2 competence factors, with the science teacher, for example, using more language-focused interaction with the lower secondary

grades. In terms of their assessment practices, the teachers highlighted a formative approach to students' L2 errors, one in which they received feedback on errors but did not lose marks. Again, we can see that, implicit in their practices, is a competence approach to L2 development. Learners are seen as differently competent in the L2 in different situations and with different topics, and some of these deficits in competence can become the object of attention either in classroom interaction or in written feedback. However, what is chosen to be commented on does not appear to be classified or framed according to any public theory of language development, nor does there appear to be any integration with content learning objectives. This has the result that, in their classroom practices, it is difficult to see any principled choice of language items for reactive focus, whether positive or negative.

As was seen in the findings in chapter eight, a rich variety of stated assumptions and beliefs about the learners' L2 competence could be identified in the teachers' representations of personal theoretical knowledge in this area. Again, this personal knowledge is held and used in ways that distinguish it from the public-theoretical knowledge of issues relating to learners' L2 competence. It is much more richly-detailed and context-bound, in that it depends on the teachers' practical experience of working with their learners. Thus, the technology teacher points out that their not using English in group tasks may be less a matter of competence and more to do with the fact that they are friends and have been together since primary school. The assertion that the learners are more competent understanders than talkers is, again, based on experience rather than the public-theoretical knowledge in the immersion and other content-based literature which makes the same point about learners' L2 competence in these contexts. The affectively-based rationale for not correcting too much (the idea that too much correction will make learners afraid to speak), again is based on personal practical knowledge, and does not use public theory about motivation as a justification for practice.

In general, then, the teachers' representations of personal-theoretical knowledge in this domain are firmly rooted in their experience, in their personal practical knowledge of learners and context. The teachers produce rich representations of variation in learners' L2 competence across a range of dimensions, and these are reflected in their practices and descriptions of practice. There is also evidence of knowledge of self, in that the

teachers' own L2 competence comes into play in using language in different situations. This was seen in the technology teacher's characterisation of himself as being more competent in using the 'limited' language of the classroom as opposed to the more complex language of the workshop. It was also seen in classroom practice in the science teacher's willingness to entertain epistemic uncertainty about aspects of the L2. When the teachers' L2 competence was a focus of concern, there was clear overlap with the other two perspectives on language and language awareness. Knowledge gaps could cause problems in using the L2 as a tool for teaching, where flexibility in language use in different situations was called for. Or a lack of formal L2 knowledge could be an aspect of language as curriculum concern, for example in not knowing the correct pronunciation of a key term.

Overall, there was evidence in the teachers' practices and representations of practice of an implicit orientation to a competence pedagogy as far as the learners' L2 development was concerned. That is, L2 development can be expected to happen naturally by dint of participation in subject-matter learning, without any need for a systematic or explicit focus on language. However, this orientation was implicit in their practices and representations of personal theory and beliefs, and not linked to any public theories which could have provided justification for this orientation, such as the input hypothesis. Not having a systematic or planned approach to L2 growth as a matter of competence is of course strongly linked with the fact that the L2 as a curriculum concern was also somewhat 'diffused' in Leung's (2001) term. In order to have a clear policy about what aspects of L2 performance to react to, it is first necessary to have identified at the planning stage what the important elements are, and how they integrate with the content learning objectives. In this sense, it is also significant that *what* the teachers chose to focus on in reactive feedback broadly reflected what has been found in other content and language integrated contexts (Lyster 2007). Lexis and phonology were the main foci of reactive attention, with grammar and discourse almost totally absent. As Lyster (2007) points out, lexis is highly salient for teachers teaching content through an L2, as it is clearly linked to the highly meaning-focused atmosphere of content lessons. Phonology is also a highly perceptually salient feature of learners' L2 production, and thus more amenable to being noticed and immediately repaired than, for example, problems of syntax or inappropriate lexico-grammatical realisations of register variables.

9.3 TLA-CLIL in relation to other knowledge bases for CLIL teaching

In chapter four, Andrews' (2007) model of language teacher language awareness was taken as a starting point for the development of a model of language awareness for CLIL teachers. In both contexts, language awareness is seen as a component of pedagogical content knowledge (PCK), but an important difference is that, in language teaching, language awareness constitutes a considerable proportion of subject knowledge. In CLIL, teacher language awareness has, in Richardson's (2002) terms, a strong foundational and a more oblique disciplinary aspect. It is not so clearly linked, as it would be in language teaching, to subject knowledge, though in functional approaches to language as a curriculum concern it would clearly have much closer links to this kind of knowledge. The study's findings showed that, in their representations of language awareness in all three perspectives, the teachers linked this knowledge to the other components of practical knowledge for teaching. Representations of knowledge about language did not stand on their own, but were connected with representations of knowledge of learners, of context, of curriculum and aims, of instructional strategies, and of self. The study's findings thus support the assertion that teachers' practical knowledge is a holistic construct, i.e. that it is not possible to hold one component up to the light without also taking into consideration at least some of the others. At any given time, for analytic purposes, one aspect may be the focus of attention (in this case language awareness) but it will always be seen in the light of at least one of the others.

Figure 9.2 represents this inter-relation between all the aspects of teachers' practical knowledge, including TLA, graphically. The study's findings provide ample evidence of this inter-relatedness. Whenever the teachers described an aspect of their practices in which TLA was foregrounded, they always did so in terms of at least one other component. Thus, when they described how they used the L2 as a tool for achieving pedagogic goals, they referred to content knowledge in terms of the specific knowledge or skills they were focusing on, or to the learners' epistemic states in relation to the concepts to be learned. When representing the L2 as a curriculum concern, they did so

in terms of the contextual constraints (e.g. a packed syllabus to get through) which prevented them from incorporating more focus on language into their teaching. When describing their practices and personal theories as regards the L2 as a matter of learner competence,

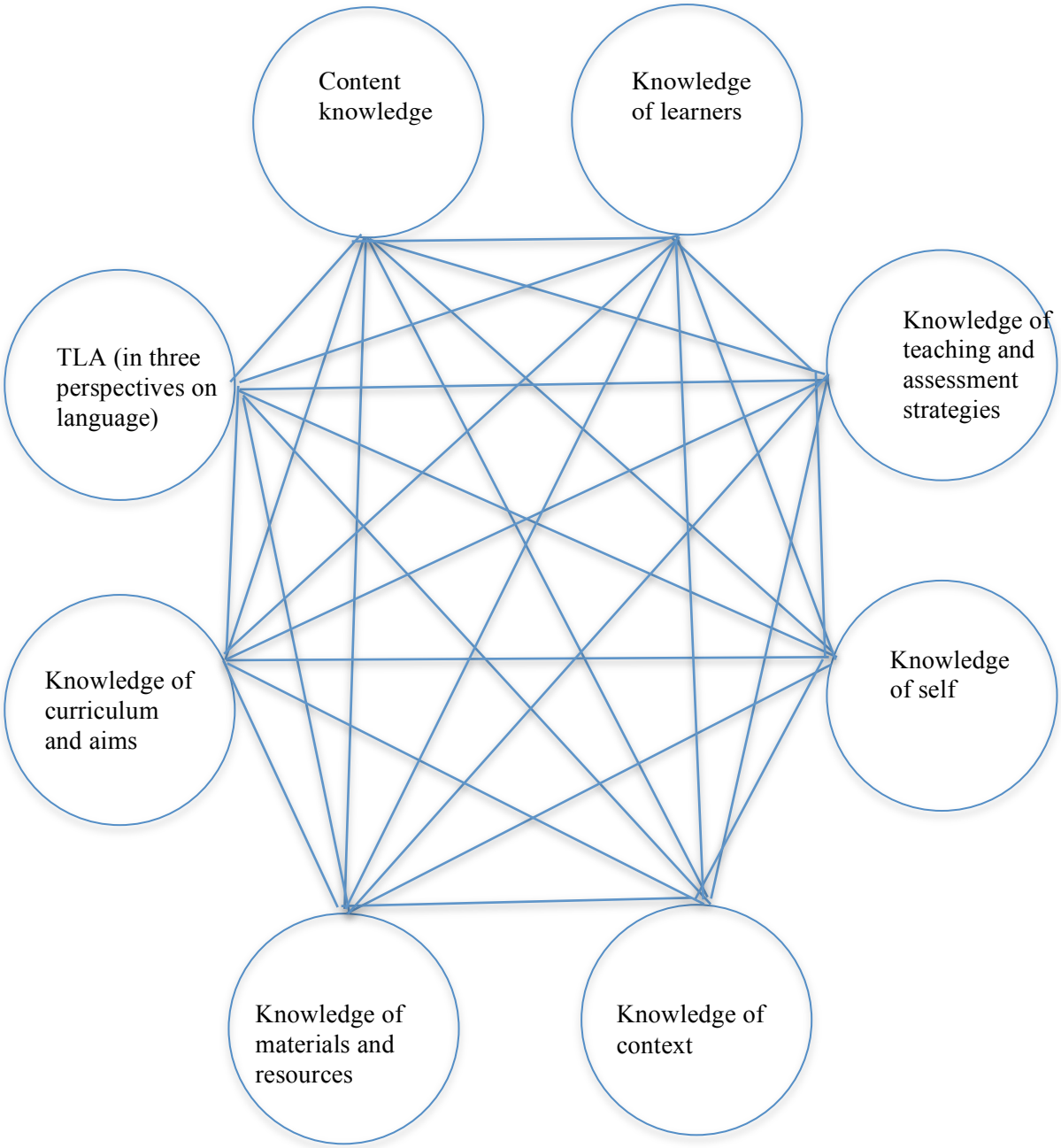

Figure 9.2 Inter-relation between TLA and other components of practical knowledge

they did so in terms of a range of learner (age, grade) and contextual (activity, topic, situation) factors.

Overall, the study's findings suggest that TLA for CLIL teaching is neither the kind of knowledge that is used in second language pedagogy, nor can it be simply 'bolted on' to content teaching. It is inextricably intertwined with all the other elements of practical knowledge involved in content teaching. CLIL teachers cannot describe the L2 as a tool for learning without linking this to content-specific goals and learners' conceptual states, and the specific instructional and assessment strategies they have chosen to use. They cannot describe the L2 as a curriculum concern without linking it to aspects of subject-specific literacy and the linguistic demands of the activity formats and materials and resources they use, and the institutional and other contextual constraints. They cannot describe the L2 as a matter of competence without linking this to their learners' developmental states, or their own L2 competence in the other two domains.

The study's findings highlight not just what types of language awareness the teachers have, and how it relates to the other components of practical knowledge, but also *how* this knowledge is held (Elbaz 1983). The teachers' representations and enactments of practice are much richer in the personal knowledge modes than in the public ones. This is, of course, to be expected, and concurs with the general descriptions of the personal dimension of practical knowledge in the teacher cognition literature (Connelly and Clandinin 1987; Elbaz 1983; Fenstermacher 1994; Verloop, van Driel and Meijer 2001; Woods and Çakir 2011). However, the study's findings suggest that 'personal' should not be taken to mean 'individual' or 'idiosyncratic'. The teachers' constructions and representations of language awareness in the personal knowledge modes show that it is a type of knowledge that is related to experience of working in a specific context, with its own objectives and constraints. In Elbaz's (1983) term, this knowledge is given a personal rather than a public-theoretical *orientation*, as it is represented as linked to actual practices in a specific context. Being personal in this way in no way implies that it cannot be shared knowledge, and this is seen in the similarities in the ways that teachers represented their personal knowledge, both practical and in terms of their underlying assumptions and principles.

9.4 TLA-CLIL and L2 classroom interactional competence

Andrews' model of teacher language awareness sees subject knowledge as mediated by teachers' L2 *proficiency*. This study's findings suggest that this may be a rather static view of the nature of the language awareness necessary not only to mediate subject matter knowledge and skills, but to manage the continual shuttling between the business of the different classroom micro-contexts and the frequent language-focused episodes which are characteristic of CLIL lessons. As early as 1986, Kramsch criticised the narrowness of a 'proficiency' approach to L2 competence, recommending that the concept be expanded to include interactional competence. According to Hall and Pekarek-Doehler (2011: 2), interactional competence (IC) has the following components:

- Knowledge of social-context-specific communicative events or activity types, their typical goals and trajectories of actions by which the goals are realized and the conventional behaviors by which participant roles and role relationships are accomplished;
- The ability to deploy and to recognize context-specific patterns by which turns are taken, actions are organized and practices are ordered;
- The prosodic, linguistic, sequential and nonverbal resources conventionally used for producing and interpreting turns and actions, to construct them so that they are recognizable for others, and to repair problems in maintaining shared understanding of the interactional work we and our interlocutors are accomplishing together.

The classroom practices described in the study's findings are clear examples of this L2 interactional competence in action. Within the lessons, the micro-contexts are 'social-context-specific events or activity types' which recur throughout the corpus. They have typical goals and trajectories of actions which are in a reflexive relationship with teachers' pedagogic goals (Seedhouse 2004). Each micro-context has inherent to it a set of participant roles and role relationships, such as giver and follower of instructions, motivator and troubleshooter during task-based work, informer of outcomes of completed tasks, and evaluator of appropriacy/accuracy of contributions. Each requires different sets of turn-taking, prosodic, linguistic and sequential resources. The

technology teacher's identification of his own shortcomings in one of these contexts is evidence that interactional competence is real for teachers too, as an object of reflection. Further evidence of this is the fact that the teachers, such as the science teacher, were able to identify different types of interaction and their goals. These included dialogic interactions on more everyday topics to find out what students think, question-and-answer sessions to check students' knowledge, explanations of concepts, and illustrating concepts through 'self-disclosure', among many others.

Interactional competence is not only relevant at the level of language as a tool for achieving pedagogic goals, but is inherent in all the teachers' practices, down to the smallest turn-constructional unit, turn or sequence. As was seen in the findings on language as a curriculum concern and as a matter of competence, the teachers' proactive and reactive shifts of attention to the L2 in their LFPs were accomplished interactionally through context-specific patterns which required the use of a range of prosodic, linguistic, sequential and nonverbal resources. The science teacher shifted attention to words such as 'helpful' and 'harmful' through the use of a repeated sequential pattern of elicitation of claims and demonstrations of knowing. In the technology workshop, the teacher deployed a wide range of linguistic and nonverbal resources as he drew attention to the names of tools or shifted between evaluation of student output and the repair work of maintenance of shared understanding in the 'shelves' sequence.

It is significant that Hall and Pekarek-Doehler describe interactional competence in terms of knowledge (they use the terms 'knowledge' and 'ability'). For, if L2 interactional competence is a type, or types, of knowledge, then it must play a part in the knowledge that CLIL teachers require for teaching. It is an aspect of TLA that underpins the other types of knowledge in the three perspectives on language. In fact, it is knowledge without which there would be no possibility of enacting these three perspectives, or indeed any other practical knowledge for teaching. Just as Macbeth (2011) has shown that there is an interactional 'understanding' in classrooms that is a prerequisite for *all* curricular understandings, for teachers there is an interactional competence that must be there for any pedagogical action to take place. Given that CLIL teaching takes place in additional languages, it is an *L2* interactional competence. Not only that, it is a *classroom* L2 interactional competence (Walsh 2011). It is also, as Young (2008) points out, a shared competence, one that cannot be understood by

isolating individuals. The CLIL classroom micro-contexts and other interaction sequences through which teaching acts are carried out are a matter of shared classroom interactional competence, distributed amongst the teacher and the students. By focusing on *teaching* practices in this study, we foreground one of the participants, the teacher, but the other participants are always in the picture, as in Escher's famous picture of flying birds (figure 9.3). If we see the teachers as black birds, we focus on their practices, and the students, as white birds, fade somewhat into the background. But they are always there, and the interaction cannot be understood without their participation. Classroom L2 interactional competence for both teachers and learners should be a central concern of CLIL, and it has only begun to be focused on in CLIL and immersion research (Evnitskaya and Morton 2011; Pekarek Doehler and Ziegler 2007). The findings of this study provide evidence that L2 classroom interactional competence for CLIL is an essential component of TLA for CLIL. It is language-and-interaction related knowledge that is inextricably intertwined with the activity of teaching content in an additional language.

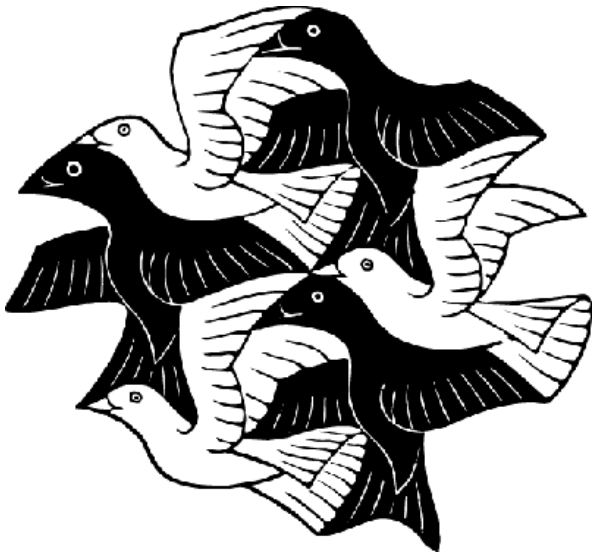

Figure 9.3 Escher's flying birds representing shared interactional competence.

Adding interactional competence can considerably enrich Andrews' construct of TLA. In his model, TLA acts as a bridge between teachers' subject knowledge and their L2 proficiency. As is discussed in more detail in the next section, a 'proficiency' view can be a rather narrow conceptualization of linguistic/communicative competence. If we add classroom interactional competence, as understood here, to the model of TLA, we get a

much richer picture of the ways in which teachers use language-in-interaction to mediate subject teaching.

9.5 Implications for CLIL practices and teacher education

The study's findings point to the conclusion that, while the teachers displayed a sophisticated interactional competence and a rich and nuanced awareness of the context in the personal knowledge modes, there was an overall lack of a systematic approach to language. Language was, in Leung's (2001) term, more a 'diffused curriculum concern' than a distinct focus. The evidence from the teachers' representations and enactments of practice is that CLIL pedagogy can have different, and in an important sense, opposing, approaches to content and language. Using Bernstein's (2000) terms, there is a 'performance' approach to content, and a 'competence' approach to language. This can be seen in the strong classification and framing of the content and the weak classification and framing of language. That is, whether the subject is history, geography, biology or technology, there is a clear and distinct focus on what content is to be learned, and on the sequence and pace of the instruction. In contrast, there is no clear and distinct focus on what aspects of L2 competence are to be developed, or how the L2 can be integrated into the curriculum. Doing so would require a stronger classification (what aspects of L2 are to be the focus) and framing (how are these features to be incorporated into teaching sequences and assessed?).

Because there appears to be a 'competence' pedagogy in operation as far as language is concerned in the teachers' cognitions and practices, language is in an important sense left to its own devices. The overall impression is that the expectation is that learners will 'pick up' the L2 through participation in activities. Language focus, when it does occur in LFPs is largely incidental, driven by the needs of the moment, whether a student's need for a word or expression or an unexpected difficulty in a piece of material. These practices, in themselves, are necessary and useful, and it is highly likely that they are implicated in learners' progress in using the L2 (though that would be a question for further research). However, if the potential of CLIL as a genuine 'fusion' of content and language learning (Dalton-Puffer, Nikula and Smit 2010) is to be realised, there are strong arguments in favour of the need for a more 'performance'-oriented, strongly classified and framed approach to L2 development. There are several potential

candidates for providing such a framework, among these being Lyster's (2007) 'counterbalanced' approach, an L2 interactional competence approach, and that of functional approaches to language (Llinares, Morton and Whittaker 2012), all of which have advantages and disadvantages as knowledge bases for integrating language and content in CLIL practice and teacher education.

The counterbalanced approach has the advantage of incorporating findings in SLA research, especially in the immersion programmes in Canada, to the problem of integrating content and language. Its basic argument, that teachers need to adjust the focus of instruction away from the prevailing meaning-focused orientation of content teaching in order to make language forms more salient, is appealing especially to those who come to CLIL from an SLA background. One disadvantage is that it seems to have an overriding concern with the accurate production of morphosyntactic forms, largely driven by the perception of persistent errors in aspects of French such as gender by English-speaking learners. Lyster is careful to point out that the approach does not favour decontextualised grammar instruction, and that shifting attention to form should be done in the context of meaning-focused activities, but he also advocates noticing, awareness and practice activities focused on specific L2 features. In CLIL, this would involve teachers acquiring a repertoire of such activities which they would need to integrate into their content teaching sequences. Given the pressure to cover the curriculum reported by the teachers in the study, it seems unlikely that they would have the time or be willing to incorporate such activities. There is evidence in the study's findings that the teachers see a clear division of labour between content teachers and language teachers, with language teachers being responsible for such language-focused work as highlighting the features and structures of texts.

Another question left open by the counterbalanced approach, and this is potentially an advantage, is that of *which* aspects of language should be selected for proactive or reactive attention. If the aspects of language selected respond to an SLA-driven programme of morphosyntactic features highlighed for accurate production, there may well be a weakening of content and language integration, or fusion. As mentioned above, three decades ago Kramsch pointed out the failings of a 'proficiency' approach to L2 development, particularly in contexts where intercultural awareness was an important educational aim. As she put it,

> If we want our students to mean what they say and say what they mean in the foreign language, we must be ready to develop less their accuracy and more their discourse aptitude in and through the foreign language.
>
> (Kramsch 1986: 370)

By 'discourse aptitude' she meant the ability to temporarily enter another person's frame of reference and to be able to follow the 'cultural logic' of their conversation. She thus advocated going beyond a 'proficiency' approach which privileged the accurate production of grammatical forms, to an 'interactional competence' approach, in which L2 education would equip learners to have a greater awareness of their own cultures and interact more productively with those who were culturally different. It would appear that such an approach to L2 development would be entirely appropriate for CLIL, especially given the importance of 'culture' in the well-known 4 Cs approach (Coyle, Hood and Marsh 2010). As was discussed in chapter three and in the previous section of this chapter, Kramsch's concept of interactional competence has been reactivated and reinvigorated by more recent work (Hall, Pekarek-Doehler and Hellerman 2011; Young 2008). The study's findings showed that teachers (and learners) displayed many of the features of interactional competence as described by Hall and Pekarek-Doehler (2011). An L2 interactional competence approach to language in CLIL, especially in pedagogic approaches in which learners are expected to take on a wide range of roles and role relationships (as recommended by Dalton-Puffer 2009), would equip learners to become aware of and fully use a rich variety of linguistic resources in subject-specific communicative events.

However, there are possible obstacles to the implementation of such an approach. One is that classrooms, and the discourse found in them, are not always rich contexts for the development of L2 interactional competence. Kramsch was clear about their limitations in this regard:

> Classroom discourse is institutionally asymmetric, non-negotiable, norm-referenced, and teacher-controlled, thus hardly conducive to developing the interpersonal social skills that require interpretation and negotiation of intended meanings (Kramsch 1986: 369).

As was discussed in chapter three, researchers in immersion and content-based teaching have long expressed doubts about such classrooms as promising settings for L2 development (Musumeci 1996; Pica 2002; Swain 1988). More recently, studies of CLIL classroom discourse have also pointed to its limitations as an environment for the development of communicative competence (Dalton-Puffer 2007, 2009). However, the findings of this study suggest that the constructivist or 'hands-on' educational culture encouraged by the BEP was related to the existence of a somewhat wider range of classroom discourse contexts, with the possibility of a wider range of roles for the students. It is in this sense that a 'fusion' of content and language in CLIL pedagogy may only be possible if there is a dialogue between subject-specific pedagogy and applied linguistics. The pedagogic approach taken in the subject teaching will have far-reaching effects on the opportunities for L2 use and development afforded by participating in classroom activities. This can already be seen in CLIL and immersion studies which take a situated practice approach to interaction in these classrooms (Pekarek-Doehler and Ziegler 2007; Evnitskaya and Morton 2011; Morton 2012). And of course, widening the range of interactive contexts, roles and relationships in CLIL will have wide implications for the L2 interactional competence of teachers, as seen in the findings of this study.

However, if the principles of L2 interactional competence can be 'translated' into the types of 'public-practical' knowledge necessary to allow the implementation of the approach, there may be more willingness among CLIL subject teachers to adopt it. Rather than 'bolting on' morphosyntactic awareness and practice activities to subject instruction, the linguistic and nonverbal resources and interaction patterns would be 'knitted-in' to content learning activities in CLIL-specific materials. CLIL teachers would be able to see how the linguistic resources and interaction patterns contributed to the successful accomplishment of the activity. In this sense, there would be scope for a proactive approach, as teachers could draw attention to these features in preparation for activities. However, in order to focus attention on the linguistic and other meaning-making resources, they would need an adequate descriptive framework to do so. This can be provided by functional approaches to language.

Adopting a functional approach to language can overcome the 'competence' approach that was evidenced in the study's findings by providing a more strongly classified and framed approach to L2 development in CLIL, and one that is more closely 'fused' with content teaching than the morphosyntactic forms highlighted within SLA. As Mohan and Beckett point out, there is a lack of 'any evidence or explicit and detailed claims that the correction of errors of grammatical form is a sufficient condition for the development of oral and written language as a medium of learning' (2003: 423). A functional approach, as discussed in chapter three, provides rich descriptions of the subject-specific texts (genres) and their lexicogrammatical features (register) which learners need to control to perform successfully in academic content learning. Not only does a functional approach such as systemic functional linguistics (SFL) offer language descriptions more fully integrated with the nature of educational texts and activities, it has also informed pedagogical interventions such as the genre approach (Martin 2009), which can open up a wide range of possibilities for integrating content and language in CLIL teaching and assessment (Llinares, Morton and Whittaker 2012; Morton 2010). Evidence from other educational contexts, such as mainstream and ESL history teaching, shows that teachers are willing to explore such approaches, with often positive outcomes for their learners (Coffin 2006; Schleppegrell, Achugar and Oteíza 2004).

Such approaches to the integration of the L2 within content teaching all have potential for acting as part of the knowledge bases for CLIL teachers' TLA. Using the tri-perspectival conceptualization of language in CLIL adopted in this study, such knowledge could be organized in three modules for the purposes of CLIL teacher education, as shown in table 9.1. In using this approach, it would be crucial for there to be a strong emphasis on the 'translation' of public-theoretical knowledge into public-practical knowledge. That is, all of the approaches would need to be exemplified in well-designed activities and materials, or in a thoroughly scaffolded approach to developing the skills for the design of such materials. It is only in this way that principled approaches to the fusion of content and language in CLIL have the chance to cross the boundary between the second and third quadrants of the knowledge modes and become personal practical knowledge.

TLA Domain	Public-theoretical knowledge	Public-practical knowledge
Language as a tool for teaching and learning	Sociocultural theory (mediation, scaffolding); dialogic teaching; 'thinking together'; classroom registers; interaction patterns; interactional organization and pedagogic purpose; multimodal communication.	Use of frameworks for planning units and analyisng own language use (e.g. Mortimer and Scott 2003); Self-evaluation of teacher talk (SETT) (Walsh 2006); video-based analysis and reflection on teaching sequences, identification of patterns.
Language as a curriculum concern	Subject-specific literacies; the notions of genre and register; language of, for, and through learning; proactive attention to language forms; role of language in assessing learning outcomes; principles of materials selection, evaluation, design and use for the curricular integration of content and L2.	Awareness-raising of genre and register features of key subject-specific text-types; familiarisation with genre pedagogy; identification of language linked to cognitive operations and knowledge structures (Mohan 1986); identification of targetted language forms for proactive focus and/or assessment; familiarisation with noticing, awareness and practice activities for proactive language focus; selection, design and use of materials and resources with integrated approach to content and L2.
Language as a matter of L2 competence	Different approaches in SLA to L2 development (sociocultural, sociocognitive, situated); importance of output; knowledge of reactive approaches to learners' L2 output; functional and pragmatic aspects of L2 development in CLIL contexts; broad and inclusive notion of communicative competence, and how CLIL learners' may develop it; interactional competence as a fundamental aspect of L2 development; awareness of own L2 interactional competence.	Interactional or 'contingent' scaffolding; register or functional scaffolding; classroom techniques for reactive focus on language (prompts, elicitation, recasts, metalinguistic explanations etc.); criteria for formative and summative assessment of language; structured reflection on own L2 use in other domains.

Table 9.1 A modular tri-perspectival approach to TLA for CLIL teacher education

The study's findings show that the teachers do hold and use richly-nuanced personal knowledge and highly developed interactional competence adapted to their teaching context. However, to prevent this knowledge becoming a self-perpetuating loop, there needs to be productive engagement with the range of public-theoretical perspectives on language in CLIL reviewed in this study. The four modes knowledge framework proposed in this study can offer a principled approach to encouraging movement across the boundaries between the four types of knowledge. CLIL teacher education activities designed to raise awareness of the different perspectives on language can begin in the top left-hand quadrant of figure 9.1 by asking teachers to articulate their personal theories and beliefs about the role(s) of language in CLIL. They can then be introduced to public-theoretical perspectives, in the form of a dialogue between these and their own beliefs. Moving to public-practical knowledge, the teachers would be introduced to well-designed activities and materials which exemplify the public-theoretical approaches, and again enter into a dialogue with their own experience as they evaluate the potential of these activities for their own contexts. If the teachers are in-service, or have a practicum, they can adapt and implement these activities with their classes, thus expanding their repertoires of personal-practical knowledge. Reflection and critical evaluation of the outcomes of using the materials will in turn contribute to the enrichment of their personal-theoretical knowledge. Of course, this is only one possible trajectory for teacher development activity, as communication between the four knowledge modes can travel in multiple directions (see Beijaard, Meijer and Verloop 2004) for a similar approach to the growth of teachers' practical knowledge.

Coyle (2011) suggests an approach to CLIL teachers' professional development which has interesting resonances with the findings of this study. She reports on a CLIL research network in which science and language teachers, and their learners, worked with a researcher to identify aspects of their own practices in using language in science classrooms which were conducive to learning. They classified features of language use that supported learning in three groups (language forms to express meaning, language functions making meaning, and subject genre language). This framework then became a conceptual tool that the teachers could use when planning and analysing language use in CLIL science lessons. In terms of the modes of knowing framework proposed in this study, such teacher-focused research allows teachers to generate and articulate personal theoretical knowledge in the form of theories and conceptual frameworks which emerge

from reflection on and inquiry into their own practices. In Coyle's words, teachers can 'create their own organic theories of practice which develop from a critical approach to their own practice' (2011: 67). Such theories of practice can travel through the knowledge modes trajectory to become public theoretical knowledge as they are made available to the wider community of CLIL practitioners and researchers.

Notwithstanding laudable initiatives such as that described by Coyle (2011), the challenges in terms of teacher education and professional development of moving towards a greater fusion of content and language should not be downplayed. It may be that such challenges have in fact been underestimated in the rush to implement CLIL initiatives in a wide range of educational contexts. Even language teachers find it very difficult to incorporate language objectives when planning task, project or content-based teaching sequences (Bigelow and Ranney 2005). And, as a recent study by Cammarata and Tedick (2012) shows, the integration of content and language poses a real difficulty for immersion teachers. As interest in CLIL grows around the world, it is increasingly vulnerable to being implemented as a top-down initiative which does not take people and their contexts into account (Wedell 2009). Integrating content and language teaching needs to be much more than raising the levels of L2 proficiency of subject teachers, or leaving students' L2 development to an incidental and diffused 'competence' approach to language. The practices and cognitions of the teachers reported in this study are exemplary in many respects, as they were working as part of a highly prestigious and positively-evaluated project. Nevertheless, the study shows that, even in such a successful programme, there is still quite a long road to travel if teachers' language awareness is to be fully integrated in a principled fusion approach to CLIL.

9.6 Implications for research on teacher cognition and practices

In chapter five, some problematic issues in teacher cognition research were highlighted. These could be summarised as follows:

- The need for more reflexivity in recognising that cognitions obtained in studies may be an artefact of the elicitation methods used;
- The related problem of a drag towards individualistic cognitivism;

- The failure to recognise that elicitation methods and cognitions obtained are discursive phenomena;
- The failure to recognise the socio-interactive and situated nature of data-gathering methods such as qualitative interviews;
- The lack of shared understanding of key concepts between researchers and teachers, and the possible 'flooding' of interviews with terminology that does not reflect participants' reality;
- The problematic distinction between 'professed' and 'attributed' cognitions (Speer 2005).

As discussed in chapter five, the epistemological assumptions underpinning the study and the methodological approach used were in part a response to these issues and an attempt to mitigate them. Perusal of the analyses of the teachers' representations of practice in chapters six, seven and eight should reveal that the study largely successfully avoided falling into cognitivist assumptions that see verbal reports as windows onto underlying cognitions. Following a social practices and conversation-analytically informed approach, the teachers' representations of practice, particularly in the video-stimulated comments, are seen themselves as actions which construct versions of reality as part of the business of doing the interviews, itself a social practice.

Overall, the study's analyses and findings support Edwards' (1997) claim that even such purportedly 'invisible' aspects of teachers' practices such as their educational aims and philosophies are amenable to study as discursive phenomena. As Bourdieu pointed out in his work on practice theory, the 'knowledges' produced in practitioners' representations or explanations of practice are 'the product of the same generative schemes as the practices they claim to account for' (Bourdieu 1977: 20). A social practices approach does not separate the inside and the outside, but sees the achievement of practical outcomes as mediated and prefigured by 'arrangements of sayings, doings, set-ups and relationships' (Kemmis 2009: 32). This was seen in the analyses of chapter six, where the teachers' 'sayings' and 'doings' both in the video-stimulated comments and in the classroom were congruent. That is, their representations and enactments of practice were 'coming from the same place', with there being no need to artificially separate the teachers' practical understandings as embodied in classroom activity from their representations of practice. In a discursive practice

approach to teacher cognition, then, the disjunction between 'professed' and 'attributed' cognitions is respecified as both being dimensions of the same practice.

The use of the video-vignettes to elicit teachers' representations of practice provides support for Speer's (2005) claim that this approach is a powerful way of avoiding conceptual misunderstandings between researchers and teachers. The video vignettes used in the study allowed the researcher and teacher to focus on specific classroom actions and to negotiate the meanings of these actions. Even so, as the findings show, it was not always easy to engineer a mutual focus on interaction as a phenomenon, and teachers tended to 'look through' the interaction to the pedagogical agendas they were using classroom talk to move forward. That said, it would have been much more difficult to have any focus on interaction at all if the video-vignettes had not been used, and there can be a good deal of confidence that this method reduced the danger of inappropriate attribution of cognitions to the teachers.

Overall, though, there is a tension in the study between the legitimate interest in the substantive issues relevant to knowledge and practice in CLIL, and the methodological and metatheoretical approach that highlights the 'active' nature of the settings in which data were elicited (Holstein and Gubrium 2004). As Holstein and Gubrium put it, 'The analytic objective is not merely to describe the situated production of talk, but to show how what is being said relates to the experiences and lives being studied in the circumstances at hand.' (2004: 156). In this sense, the study sought to strike a balance between a focus on the action-orientation of the talk produced in interviews and the practices and related understandings that were the focus of the study, the quintain, in Stake's (2005) term. Teacher cognition research which opts for a non-cognitivist, discursive perspective will need to find this balance. It is imperative to do so, though, as it cannot afford to ignore the 'contingent' and necessary' problems inherent in verbal report techniques (Potter and Hepburn 2005), or the 'discourse dilemmas' as they are described in applied linguistics research (Mann 2011). These caveats aside, the present study shows that a good deal of mileage can be obtained in research on teachers' knowledge, thinking and practices by taking an abstemious approach to discourse as an indicator of underlying cognitions. An overall social practices approach, informed by work in discursive psychology and conversation analysis can be a powerful force for a

respecification, and steps towards a solution, of the kinds of methodological and conceptual problems in teacher cognition research highlighted in this study.

9.7 Chapter summary and conclusion

This chapter discussed the study's findings, setting them in the context of the theoretical issues relating to different conceptions of language in CLIL and types of teachers' knowledge reviewed in chapter four. It placed the study's findings on the teachers' language awareness in the three perspectives in the wider context of the four knowledge modes, in order to show the potential relationships between broadly public and personal ways of knowing. The two 'public' modes served as the theoretical background against which the teachers' personal knowledge about language could be described. The teachers' personal knowledge was seen to be rich and layered, but there was very limited engagement between these knowledge modes and the public modes in the teachers' enactments and representations of practice. The chapter also used the study's findings to discuss the relationships between teacher language awarenes (TLA) and other aspects of the teachers' practical knowledge, suggesting that TLA-CLIL cannot be separated from knowledge of subject matter, learners, curriculum, aims, context and self. Beyond the three perspectives on language, L2 interactional competence was seen to be a key component of TLA-CLIL, a kind of knowledge which underlies all the others, and which enables teachers to use the L2 as a tool for achieving pedagogic goals and for carrying out the kinds of language-focused practices (LFPs) described in the study's findings.

Overall, the teachers oriented towards a 'competence' pedagogy for the language component of their practices, in which the L2 was not a distinct curricular concern, as opposed to a more strongly framed and classified 'performance' pedagogy for the subject-matter component. This has implications for CLIL classroom practices and teacher education, and a range of approaches through which a greater 'fusion' of content and language in CLIL teacher could be brought about were discussed. It was recommended that the triperspectival model of language used in this study could serve as the basis of a modular approach to language awareness in CLIL teacher education. The chapter also highlighted implications for teacher cognition research, especially the need for a more reflexive attitude to the nature of discourse as data in teachers' verbal

commentaries, and the possibility of a more social constructionist, less cognitivist, approach to teachers' practices and understandings. The next, and final, chapter concludes the thesis by providing an overall summary, highlighting the key contributions to the fields of CLIL and teacher cognition research, identifying limitations and suggesting directions for future research.

Chapter 10. Conclusion

10.1 Introduction

Chapter nine discussed the study's findings, placing them in the context of the theoretical perspective on the roles of language in CLIL and on teachers' knowledge reviewed in chapters three and four. This, the final chapter, summarises what the study set out to investigate, how it was carried out, and what the main findings were. It also sets out what contributions to knowledge in the fields of CLIL and teacher cognition the thesis makes. Limitations of the study are discussed, and directions for further research suggested.

10.2 Summary and overview of the study

This thesis set out to contribute to understanding in the fields of teacher cognition and CLIL by exploring the theoretical construct of CLIL teachers' language awareness (TLA-CLIL) in one sociolingistic and educational context, the Spanish Ministry of Education/British Council Bilingual Education Project. It was motivated by the fact that, although CLIL gives importance to content learning outcomes, it is an educational approach justified by the perceived need to promote multilingualism around the world, particularly in Europe (European Commission 2003). It is in this sense that CLIL would not exist at all if it were not for its justification as an aspect of language (L2) education. Central to the CLIL enterprise is the competence of the teachers, both in terms of subject teaching expertise and L2 proficiency. However, beyond a concern with subject teaching qualifications and language level in the L2 used as a medium of instruction, CLIL research had not to a great extent theorised the teacher language awareness (TLA) necessary for effective instruction. In order to do so in this study, it was necessary to bring to CLIL research constructs from the long and rich tradition in teacher cognition studies, both in general education and in language teaching. Such constructs as practical knowledge, pedagogical content knowledge and teacher language awareness (TLA) had not been extensively used in studies of CLIL teaching.

While teacher cognition studies in CLIL are relatively sparse, there is however an extensive literature on CLIL, immersion and other content-based approaches as contexts

for L2 development. This literature was reviewed in chapter three, and from this emerged the tri-perspectival conceptualization of language adopted in the study, with the three perspectives on language as a tool for learning, language as curriculum concern, and language as a matter of competence. Chapter four introduced the research field of teacher cognition, and the concept of teacher language awareness (TLA) was reviewed, with its three components linked to the three perspectives on language in CLIL. A framework of four knowledge modes through which teachers' language awareness is held and used was introduced. In this way, the study set out to explore not just the contents of the teachers' TLA-CLIL, but how it was held and deployed. Chapter five highlighted some theoretical and methodological problems in teacher cognition research, particularly its cognitivism and the need for a more reflexive use of discourse as data. The study's overall social practices perspective was introduced as a way of addressing these issues. The implications of this approach were also taken up in chapter five, which introduced the two approaches which informed the data analysis process: conversation analysis and discursive psychology. The study's multicase study design was described, with the aim being to build a characterisation of the 'quintain' - the contents and orientations of the teachers' TLA-CLIL.

The findings showed that the teachers' language awareness in the three perspectives was largely derived from personal experience and practice, and did not generally engage with the public theories and practices that are found in the applied linguistics and education literature. Their knowledge consisted in rich representations of the role of language in relation to other aspects of practical knowledge for teaching, such as knowledge of learners, subject, curriculum, context and self. The study's analyses also portrayed the teachers' L2 interactional competence as they used language as a tool for learning in five interactional micro-contexts and in their proactive and reactive language-focused practices (LFPs). These findings contribute to our understanding of the relationships between the different aspects of teachers' knowledge in the context of teaching subject matter through an L2, and to a greater understanding of the role of L2 interactional competence in such teaching. The study also contributes to understanding of how different knowledge modes interact in teacher development, suggesting that there is a need to promote greater engagement with public theories and practice in order to enrich and expand CLIL teachers' practical language awareness. The study also contributes to teacher cognition research, in that its analyses of verbal commentaries as

social interaction, linked with the use of video vignettes, could address some of the problems identified in this field, such as a lack of mutual understanding between teachers and researchers, and the lack of reflexivity in the use of discourse-based data elicitation methods.

10.3 Limitations of the study

The sample of four teachers was more than adequate for a multicase study (Stake 2005; Yin 2003), and for the type of 'analytic generalisation' through which Yin (2003) claims that case studies can make generalisations about theoretical propositions rather than populations. The study's results, then, are not intended to be generalisable to whole populations, such as all the teachers in the BEP, all CLIL teachers in Spain, Europe etc., but to generate understanding of the 'quintain', that is, the nature of TLA-CLIL in these teachers' practices, and how it integrates with other types of practical knowledge for CLIL teaching. The fact that the study takes a social practices and discursive approach, with close transcription and analysis of talk-in-interaction, also requires the use of a smaller sample than in a quantitative approach (Potter and Wetherall 1987). However, as Borg (2006) points out, the use of interpretive methods has been a strength of teacher cognition research, as it has allowed researchers to highlight the complex nature of teaching, and 'to portray in rich detail what teachers do and the factors behind their work' (p. 288). Thus, while the study is limited in that it focuses on a small sample of teachers in one content and language integrated context, the Spanish Ministry of Education/British Council Bilingual Education Project, it provides a richly detailed account of teachers' knowledge, thinking and practices and contributes towards theoretical understanding of language awareness as shared understandings around which the practice of CLIL is built.

That said, the particular macro and micro sociolinguistic and educational variables that define the BEP's position on the continua of multilingual education (Cenoz 2009) need to be taken into consideration as practitioners and stakeholders in other sociolinguistic and educational settings evaluate the implications of this study for their own contexts. For example, other national contexts where CLIL or CLIL-like initiatives may be set up may have very different local language ecologies, educational cultures and access to resources, human and material, as shown by Coleman (2009) in his critical account of

English medium education practices in two Asian countries. The conditions that contributed to the positive evaluation of the BEP project (Dobson, Pérez Murillo and Johnstone 2010), such as a long-term political commitment, high levels of parental support, adequate resourcing and training of teachers, an integrated curriculum and a strong pedagogical ethos, may be difficult to replicate in other contexts where CLIL programmes are implemented.

Methodologically, the study could have gone further down the route of a much more discursive and ethnomethodologically-informed approach to teacher cognition. As discussed in section 9.6 in the previous chapter, the approach taken was to balance the legitimate focus on substantive issues relevant to the inquiry with a discursive action approach which sees psychological phenomena as a matter of what people are doing in and through social interaction. This balanced approach was justified in the study as it was able to show how the teachers' representations of their practices were not just windows to pre-existing cognitive phenomena but were themselves social actions: versions of reality constructed jointly with the researcher and designed for the interactional business at hand. However the shifting to-and-fro between these interactional practices and the study's interest in the worlds that they were describing, while productive, leaves key epistemological issues about the nature of teacher cognition unresolved. The study succeeded in contributing to teacher cognition research by largely avoiding the pitfalls inherent in cognitivist approaches, but by deliberately limiting its constructionist epistemological stance, it veered more closely to the theoretical concerns of CLIL and teacher cognition research than to a more radical social practices and discursive action approach to teachers' practices and cognitions.

While the study did not set out to measure the impact of the teachers' cognitions and practices on their learners' learning outcomes, it is important to recognise that this is a key issue that challenges researchers in teacher cognition (Borg 2006). In a sense, the lack of studies that explore the relationship between teachers' cognitions and practices and student learning is a limitation inherent to nearly all teacher cognition research, particularly in language education. However, while this study shares this general limitation, there is evidence that the discursive and social-interaction approach taken has clear potential for exploring the relationships between teachers' actions and students' opportunities for participation, with resulting impact on learning outcomes.

The study's focus on L2 interactional competence is compatible with situated learning approaches which use conversation analysis methods to track changes in learners' participation patterns (Hellerman 2008; Markee 2008). The challenge is to show in fine-grained detail the inter-relationship between teaching practices and learners' participation, at the same time exploring teachers' constructions of such practices. Using a socially-situated discursive action perspective may then help to make progress in tracking the relationships between teachers' practices (in the wide sense of actions *and* practical understandings) and learning outcomes, at least in terms of a participation metaphor for learning (Sfard 1998).

Another limitation of the study is that it is restricted to three perspectives on language, each representing clear trends in the way language is conceptualized in the second language and educational linguistics literature. It does not incorporate as part of its framework language and ideology or identity, though these dimensions can appear in relation to the other perspectives, such as the relationships between a 'competence' approach to language learning and 'progressive' education ideologies. Language as ideology/identity has not figured strongly in teacher cognition research, and for this reason, the study's scope was deliberately limited in this area. However, as CLIL increasingly becomes a site for contestation and critique (see Bruton 2011 and Coleman 2009), there will be a need for CLIL studies, including those with teachers, to engage with questions of language ideologies, power and identity, particularly where English is the chosen language of instruction.

10.4 Directions for further research

The suggestions for further research quite logically emerge from the limitations of the study discussed in the previous section. It would greatly contribute to the research knowledge-base on CLIL teachers' language awareness (TLA-CLIL) if similar case studies were carried out in other contexts. The aim would not simply be to accumulate information about local contexts, but to contribute a theoretical understanding of the knowledge bases for CLIL teaching. Questions could be asked about the nature of knowledge in the three perspectives on language, how well the perspectives account for TLA, and how TLA is held and used in the different knowledge modes. A very useful and important extension of this kind of close-up interpretive case study research would

be to carry out longitudinal studies which tracked growth in CLIL teachers' TLA, possibly linked to in-service interventions, or to course work in CLIL training courses. These studies would be considerably strengthened if they adopted a strongly socially-situated micro-interactionist approach, perhaps together with an ethnographic element. . Thus, it would be possible to combine this study's social practices and discursive action approach with the use of a more openly ethnographic methodology. In this sense, an overall linguistic ethnography approach (Creese 2010; Rampton 2006) in which micro-analysis of interaction was combined with a focus on higher-level contextual factors would be appropriate. Such an approach would capture a wider range of aspects of CLIL as a social practice, setting teachers' cognitions and practices more firmly within the educational and sociolinguistic constraints that impact on what they do. In so doing, it could address one of the limitations indicated above, by taking into account a wider range of perspectives on language, including language and power, ideology and identity.

Future studies, whether they stay within a micro-analytic approach or widen the perspective to a more linguistic ethnographic approach, could widen the range of language practices that they focus on. Borg (2006) suggests that language teacher cognition research can study the ways in which teachers make sense of and put into practice theoretical recommendations from SLA research, for example the use of corrective feedback and input enhancement. This study has shown how theoretical issues from SLA-oriented immersion research such as proactive and reactive attention to language (Lyster 2007) can be studied as aspects of CLIL teachers' cognitions and practices. Such work could be expanded in future studies to take in a wider range of CLIL teachers' practices or focus on them in more detail, such as content and language explanations (see Llinares and Morton 2010), evaluative practices, repair, classroom instructions, multimodality (see Evnitskaya and Morton 2011), and the use of dialogic interaction. Studies could also focus more closely on the cognitions and practices of teachers in specific CLIL subjects, such as science and mathematics. Although this study shows that CLIL teachers' TLA can be held and used in common ways across different subjects, it is very likely that more fine-grained studies of individual subjects will reveal a more complex variety of cognitions and practices relating to TLA-CLIL.

As pointed out in the previous section, most teacher cognition research has not set out to contribute to understanding of the relationships between what teachers think and do and learning outcomes. It is a methodological challenge, but it would be very worthwhile to design studies that looked at the relationships between teachers' practical understandings and deployment of TLA in classroom interaction and their learners' engagement in content learning activities with their affordances for L2 development. As discussed in the previous section, recent advances in L2 research which see learning as a socio-interactive phenomenon (see Seedhouse, Walsh and Jenks 2010) provide a very promising framework for such work. Research studies could be designed in which the analytic foci are not just the teachers' practices, but on how teachers and learners use the L2 along with other modes to jointly construct content and language learning acivities. If, as recent work on L2 interactional competence suggests (Hall, Hellerman and Pekarek Doehler 2011; Young 2008), this construct is a joint rather than an individual achievement, then we have a clear route ahead for investigating the inextricable links between teachers' actions (and their practical understandings) and what learners can do.

10.5 Concluding remarks

As Dalton-Puffer, Nikula and Smit (2010) point out, 'fusion' in CLIL needs to go beyond the quest for knowledge bases for pedagogical practice; there also needs to be a 'fusion' approach to CLIL research, in which multiple disciplinary perspectives are applied. This study, by combining perspectives from teacher cognition research, second language acquisition, discursive psychology and conversation analysis is a contribution to this effort. No single perspective will do justice to a hybrid educational practice like CLIL, and this study shows that creative combinations of research approaches (L2 interactional competence and CLIL classroom interaction, discursive psychology and teacher cognition) may be needed to prise out its essential features. In terms of educational practices, CLIL is already a catalyst for new understandings (Coyle, Hood and Marsh 2010). It is hoped that studies such as this one will show CLIL's potential as a catalyst for new understandings in research on teaching. The kind of knowledge that this study has started to model belongs neither to language teaching nor to the teaching of non-language subjects. Just as Shulman saw pedagogical content knowledge (PCK) as a kind of knowledge that was the 'province of teachers' and 'their own special understanding' (1987: 6), the language awareness (TLA-CLIL) investigated in this

study is the special province of CLIL teachers, and forms part of their own special shared understandings around which the practices of CLIL are built. In order for CLIL to prosper as an educational initiative, these understandings will need to be transformed into communicable forms so that a more solid knowledge base for CLIL can be established, and practice can develop in desired ways. This study is offered as a step towards that goal.

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APPENDICES

Appendix A

Transcription conventions

Based on Sidnell (2010, pp. ix-x).

.	A full stop indicates a falling, final tone.
?	A question mark indicates rising intonation, not necessarily a question.
,	A comma indicates continuing intonation.
↑ ↓	Up or down arrows indicate sharply rising or falling intonation, with the arrow placed just before the syllable in which the change in intonation occurs.
:	Colons indicate the stretching or prolongation of the sound preceding them.
[	Square brackets indicate overlapping talk onset.
=	An equal sign at the end and beginning of a line spoken by the same speaker indicates a single, continuous utterance, broken up to fit in overlapping talk.
(0.5)	Numbers in brackets indicate silence, represented in tenths of a second.
(.)	A dot in brackets indicates a 'micro-pause' of less than 0.2 of a second.
word	Underlining indicates stress or emphasis.
> <	'More than' and 'less than' signs indicate that the talk between them was speeded up.
< >	'Less than' and 'more than' signs indicate that talk produced noticeably more slowly than surrounding talk.
.hhh	Aspiration is represented by the letter h. A row of hs with a dot indicates an inbreath. Without the dot it indicates an outbreath.
m(h)e	An h or row of h's in brackets within a word indicates aspiration, which may be breathing or laughter.
(( ))	Double parentheses contain transcriber's descriptions of events.
(word)	Words in parentheses indicate that the transcription is uncertain, but is a likely possibility.
( )	Empty parentheses indicate that something was said but it was not possible to hear it clearly enough for transcription.

Appendix B

Letter of consent to parents

INSTITUTO DE EDUCACIÓN SECUNDARIA
PROFESOR MÁXIMO TRUEBA
C/ Santillana del Mar, 22 28660 Boadilla del Monte (Madrid)
Teléfono 91 632 15 12 Fax 91 632 15 18 C.C. 28041378

CONSEJERÍA DE EDUCACIÓN
Comunidad de Madrid

Boadilla del Monte 9 de febrero de 2009

Estimados padres de nuestros alumnos de ____ de Enseñanza Secundaria:

Como Uds. recordarán, dentro de las actividades de formación que promovemos en el Instituto, colaboramos con actividades de investigación promovidas por diversas universidades. El Profesor Thomas Morton, formador de profesorado de idiomas, está investigando sobre la actuación del profesorado en aulas de enseñanza bilingüe en nuestro país.

Con el fin de recabar los datos necesarios para su investigación, necesita observar y grabar algunas clases. Algunos fragmentos transcritos aparecerán publicados en su tesis doctoral y en cualquier publicación académica que surja de la misma. En todo caso, el anonimato de los alumnos y de los profesores está garantizado.

Para su realización, solicitamos su autorización escrita para realizar dicha actividad. Para esto, les rogamos que cumplimenten los datos que pedimos a pie de página y lo traigan firmado lo antes posible. En caso de no autorizarlo, les rogamos que también nos lo comuniquen por escrito.

Agradeciéndoles su cooperación una vez más y confiando que esta actividad contribuya una vez más a la formación de sus hijos e hijas, les saluda atentamente,

COMUNIDAD DE MADRID Consejería de Educación BOADILLA DEL MONTE (Madrid) I.E.S. PROFESOR MÁXIMO TRUEBA

Marcela Fernández Rivero
Coordinadora de la Sección Bilingüe

Autorizo al IES Profesor Máximo Trueba a grabar la clase de mi hijo/a ..... curso .....

Nombre, firma y fecha